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IN

1927-28

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The Hon'ble Maharaja Bahadur Keshav Prashad Singh, C.B.E., Vice-President and Member of the Bihar and Orissa Executive Council.

NOTICE.

The preparation of this book has been entrusted to Mr. J. W. C. Jackson, I.P., and it is now published under authority and with the general approval of the Government of Bihar and Orissa, but it must not be assumed that this approval extends to every particular expression of opinion.

PREFATORY NOTE.

THE main portion of this volume deals with the financial year 1927-28, viz., the period from April to March. In order to bring the history of the province up-to-date as far as possible, a short summary of the principal events of the calendar year 1928 is included as an appendix.

CONTENTS.

	Page.
Prefatory Note	v
List of Illustrations and Diagrams	ix
Chapter Contents	xi
CHAPTER I.	
Political and General Events	1
CHAPTER II.	
Finance	9
CHAPTER III.	
The Legislative Council	17
CHAPTER IV.	
Local Self-Government	24
CHAPTER V.	
Education	34
CHAPTER VI.	
Public Health and Medical Relief	46
CHAPTER VII.	
Maintenance of the Peace and Administration of Justice ...	57
CHAPTER VIII.	
Excise	69
CHAPTER IX.	
Government and the land	74
CHAPTER X.	
Agriculture	85
CHAPTER XI.	
Commerce and Industry	98

APPENDIX I.

Page.

SHORT SUMMARY OF THE ADMINISTRATION OF BIHAR AND ORISSA IN 1928 xv

APPENDIX II.

(A)—MEMBERS OF THE BIHAR AND ORISSA EXECUTIVE COUNCIL ... xlvii

(B)—MINISTERS xlvii

(C)—MEMBERS OF THE BIHAR AND ORISSA LEGISLATIVE COUNCIL ... xlvii

(D)—MEMBERS OF THE COUNCIL OF STATE FROM BIHAR AND ORISSA li

(E)—MEMBERS OF THE LEGISLATIVE ASSEMBLY FROM BIHAR AND ORISSA lii

APPENDIX III.

ABSTRACT OF THE BUDGET ESTIMATE FOR 1928-29 liii

APPENDIX IV.

SOURCES OF INFORMATION AVAILABLE TO THE PUBLIC lv

LIST OF ILLUSTRATIONS AND DIAGRAMS.

ILLUSTRATIONS.

1. The Hon'ble Maharaja Bahadur Keshav Prashad Singh, C.B.E. — Frontispiece.

2. The Patna Museum ... ... — Facing page of Chapter V—Education.

DIAGRAMS.

	PAGE.
1. Diagrams showing revenue and expenditure in Bihar and Orissa in 1927-28	13
2. Diagram showing the total amounts that have been allotted to the Reserved and Transferred departments, respectively, for new projects during each of the four years 1924-25 to 1927-28	15
3. Diagram showing the ultimate expansion in the Reserved and Transferred departments, respectively, that will result from the new projects initiated during the four years 1924-25 to 1927-28	15
4. Diagram showing the total expenditure on education in the province from different sources during the last five years ...	38
5. Diagram showing the total true cognizable crime and cost of living	60
6. Diagram showing the consumption of country spirit and revenue obtained therefrom in the districts of Patna, Gaya, Shahabad, Saran, Darbhanga, Bhagalpur, Monghyr, Purnea, Santal Parganas, Puri, Cuttack, Balasore and Manbhum ...	70
7. Diagram showing the progress of the co-operative movement ...	95
8. Map of the province of Bihar and Orissa	At the end.

CHAPTER CONTENTS.

CHAPTER I.

Political and General Events.

	Page.		Page.
The communal situation	1	The Barh *sati* case	6
The Bettiah riot	2	District board elections	6
Labour unrest	3	Royal Commission on Agriculture	7
Floods	4	The provincial press	7
The Orissa Flood Committee	6	Changes in the administration	7

CHAPTER II.

Finance.

Comparative position of Bihar and Orissa	9	The financial position, 1927-28	13
Causes of its poverty	9	The financial position at the close of the year	14
Sources of income	10	Division of funds between the Transferred and Reserved departments	15
Mineral wealth	11	Future outlook	16
Low standard of expenditure	11		
Equipping the province	12		

CHAPTER III.

The Legislative Council.

Sessions of the Council	17	Attack on the Ministry	20
Legislative bills passed	17	Budget discussions	20
Other bills	17	Voting of demands for grants	21
Questions and resolutions	19	Supplementary demands	23

CHAPTER IV.

Local Self-Government.

	Page.		Page.
The working of district boards	24	Audit	30
Local boards and union boards	25	Municipalities	31
Financial results—income	26	Income and expenditure	32
Expenditure	27	Collection of municipal taxes	32
Closing balances	29	Outdoor administration	33

CHAPTER V.

Education.

The problem of universal elementary education	34	The pay and training of teachers	40
The Primary Education Act	35	Vocational education	42
Progress of primary education	36	Boy scout movement	43
Stagnation	38	The Patna University and its colleges	43
Control of primary education	38	Female education	45
Secondary education	39		

CHAPTER VI.

Public Health and Medical Relief.

The Public Health Department: its expansion	46	Dysentery and diarrhœa	52
Local health organizations	47	Food adulteration	52
General health statistics in 1927-28	49	Water-supply	53
Comparative incidence of chief diseases	50	Hospitals and dispensaries	53
Cholera	50	Medical relief in rural areas	54
Small-pox	51	Treatment of special diseases	55
Fever	51	Medical education	55
Plague	52	Radium Institute	56
		Mental hospitals	56

CHAPTER VII.

Maintenance of the Peace and Administration of Justice.

Relations with the public	58	General features	59
Help to the police	58	Political crime: the Deoghar case	60
Discipline and health of the force	59	Murder	60
Literate constabulary	59	Robbery and dacoity	60

	Page		Page.
Rioting	61	Civil justice	65
Railway obstruction and derailments	61	Civil Justice Committee	65
False cases	62	Jail administration: number of prisoners	65
Preventive measures	62	Youthful offenders	66
The administration of criminal justice: magisterial courts	62	Health of the prisoners	67
Sessions courts: trial by jury	63	Education and reformation of prisoners	67
Criminal appeals	64	Jail manufactures	68

CHAPTER VIII.

EXCISE.

Results of the Government policy	69	Excise revenue in 1927-28	72
Sliding scale system	71	Legislation	72
		The Orissa Opium Enquiry Committee	73

CHAPTER IX.

GOVERNMENT AND THE LAND.

Variety of Tenancy Acts	75	Forests	79
Administration of land revenue	75	The denudation of forests	80
Relations between landlords and tenants	75	The general attitude to forest policy	81
Government Estates	76	Development work	82
Trust, Wards and Encumbered Estates	76	Forest utilization	82
Their management during 1927-28	77	Financial results	83
Survey and settlement	78	The canal systems of the province	83
		The Irrigation Department	83

CHAPTER X.

AGRICULTURE.

Agriculture in Bihar and Orissa	85	Sugarcane	88
General economic conditions	85	Winter rice	88
Diversity of agricultural conditions	86	*Rabi* crops	88
Character of the season	87	The improvement of agriculture	89
Bhadai crops	88	The achievements of the department	89
Jute	88	The supply of seed	90

	Page.
Artificial fertilizers	90
Agricultural engineering	91
The cattle problem	92
The Veterinary College and the Patna cattle breeding and dairy farm	93
Cattle disease	94
Preventive inoculation	94
Treatment of disease	94
The Co-operative movement	95
Progress in Bihar and Orissa	95
Provincial banks	96
Central banks	96
Primary societies	97

CHAPTER XI.

COMMERCE AND INDUSTRY.

	Page.
Coal	98
Iron and steel	99
Mica and copper	99
Lac	100
Sugar and indigo	100
Other local industries	101
The Department of Industries	101
The hand-loom industry	102
Work of the textile branch	102
The Engineering branch	103
Fisheries	104
State aid to industries	104
Technical and industrial education	105
Bihar College of Engineering	105
Other institutions	106
Aided institutions	106
State technical scholarship and stipends	107
Cost of living	107
Ports and railways	107

Bihar and Orissa in 1927-28.

CHAPTER I.

Political and General Events.

Within the province of Bihar and Orissa no event of outstanding political interest occurred during the year. The proceedings of the Legislative Council have, on the whole, been conducted in a spirit of reasonableness and good temper, and there has not been wanting an appreciation of the difficulties of Government. By its steady and continued progress in working the Reformed constitution the province has furnished an example which might have been followed with advantage by other provinces. If political education could be carried down to the electorate itself and could a lasting solution be found of the problem of welding the sections of the population, separated by religion, territorial and social distinction, into a civic whole, the future would be hopeful.

The communal situation.

One of the features of the year has been the continued antagonism between the two great communities of Hindus and Muhammadans. Early in the year the murder of Swami Sradhanand at Delhi caused a certain amount of anti-Muhammadan feeling in Bihar. There was no serious trouble, however, and it was expected that the Bakr-Id in June would pass off peacefully. This expectation was falsified. In a village of Champaran a party of Hindus attempted to attack the Muhammadans. The police stopped the main body, but a small party got past, to be routed by the Muhammadans who killed two of them. At Dinapur, the local Hindus resented the performance of cow sacrifice in a private house where it had been performed for several years, and attacked some Muhammadans, killing one woman outright and fatally injuring one man. Reinforced by Hindus from outside, they attempted to pull down and burn the house, and the subdivisional magistrate was obliged to order the police to fire. One rioter was hit and the crowd dispersed.

Elsewhere a Muhammadan in defence of his house shot dead a member of another band of the marauders. In two other districts minor riots occurred.

The Muharram in July passed off without any serious friction, and though in some districts the Hindus entirely abstained from joining in the processions, in others, in spite of the activities of the Hindu Mahasabha, they joined in freely. But in August a very serious outbreak occurred in the Champaran district. The occasion of the rioting was the Mahabir-dal procession, a Hindu festival formerly of minor importance but in the last few years organized on a large scale to compensate low-caste Hindus for the abstention from the Muharram which the Arya Samajists had imposed upon them. Its most objectionable feature is the close imitation of the Muharram emblems and procedure, an imitation which, owing to the religious origin of the Muharram, causes intense irritation among Muhammadans. The organization of these processions in the north-west corner of the province, by the Arya Samaj, had been going on for some time, and in Champaran printed notices had been issued among the villages calling upon Hindus to come into the town with spears and *lathis* for the performance, and to quit themselves like men. A crowd of twenty thousand people which collected at Motihari, the district headquarters, was passed through the town safely without a clash.

The Bettiah riot.

But at Bettiah, a subdivision of the same district, one of the largest sections of the procession deviated from the prescribed route into a narrow lane, in which stood a mosque of the particular group of Muhammadans who had taken the strongest objection to the imitation of Muharram emblems. A riot ensued in which the Muhammadans, who numbered only four hundred, were overpowered, and the Hindus followed up their victory by firing the houses, dragging out the Muhammadan inmates, and beating ten to death. About 170 persons were injured. Fortunately the rioting was restricted to Bettiah town, where a substantial force of additional police was posted shortly afterwards. The Bettiah disturbances undoubtedly embittered feelings in the Tirhut division, each party endeavouring to throw the blame on the other. The vernacular press, both Hindu and Muhammadan, unfortunately fanned the flames. With the exception however of an unpremeditated outbreak at a *mela* a few miles from the headquarters of the Darbhanga district, in which over 100 Muhammadan houses were burnt down, no serious trouble occurred during the

remainder of the year. The significance of the Bettiah riot lies specially in the appearance of a new kind of provocation which appears to have been adopted deliberately by the Arya Samaj organization. One consequence of these outbreaks has been to bring home to the Muhammadans their numerical weakness and the strength of the Hindu organizations, and this feeling has undoubtedly affected their attitude towards future Reforms.

Labour unrest.

Labour trouble within the province during the year was confined mainly to the industrial centre of Jamshedpur amongst the employees of the Tata Iron and Steel Company. Mention may be also made of the disaffection among the employees of the Bengal-Nagpur Railway which resulted in a serious riot in the month of February 1927 in the workshops at Kharagpur in Bengal. From Kharagpur the trouble spread quickly throughout the line, of which the greater portion lies in this province, and a large number went on strike for a period of over three weeks, demanding better conditions of service, better pay, and better housing. So far as this province was concerned the strike was conducted without any violence and gave rise to comparatively little inconvenience. Later in the year further trouble arose amongst the employees of this railway and a general strike appeared to be not improbable. The Central Government, however, intervened and the crisis was averted. Other railways were not directly affected by the troubles on the Bengal-Nagpur Railway, and attempts to excite the sympathy of the employees on the East Indian Railway met with little success. A slight disturbance, however, was created in November in the East Indian Railway Workshops at Jamalpur by some apprentices who were dissatisfied with the refusal of the Agent to guarantee employment to all apprentices on completion of their training. On the same line a small dispute arose in the month of May when 400 of the permanent way gangmen between Barh, Patna and Dinapur came out on strike for 4 or 5 days. Towards the end of March 1928, 600 mica sorters of the firm of F. F. Chrestien Co., Ltd., at Kodarma in the district of Hazaribagh came out on strike for over a week. The dispute was purely domestic and arose out of a change in the system of payment from monthly salaries to a daily wage.

In Jamshedpur signs of unrest began to appear early in 1927 after the visit of some representatives of the International Textile Workers' delegation, who urged the necessity of strengthening the organization of trades unions in India. The situation was

not improved by reduction of staff consequent on the retrenchment policy of the company, nor by a proposal to substitute a daily wage system for that of monthly wages. A strike lasting 21 hours occurred in the Open Hearth and Gas Producer Departments, and the dissatisfaction in these departments was not allayed for some time. In the following month the Labour Union at Jamshedpur were considering proposals for the improvement of labour conditions, such as the introduction of a six-hour day and the abolition of the daily wage system. In September some men working in the Duplex plant struck work because one of their comrades had been handled roughly by an American Swede. In January 1928 there were further short strikes amongst various sections of the employees, and the Labour Association called in Mr. C. F. Andrews to negotiate with the management. From February onwards, however, the situation gradually deteriorated, culminating in the month of June 1928 in the most serious strike in the history of the company.

Flood.

The districts of Balasore and Cuttack, especially the former, again suffered severely from floods. Their advent was heralded by abnormally heavy rainfall during the last week of July 1927 in Balasore itself and all over the southern portion of the Chota Nagpur plateau and the Feudatory States. The waters rose suddenly and simultaneously in all the main rivers, seven in number, draining to the south and the east. But the three rivers which were responsible for most of the damage were the Baitarani, the Brahmani and the Subarnarekha, and the area which suffered most severely this year was the Bhadrak subdivision of the Balasore district. A striking feature of these floods was the extensive breaches caused in the railway line, the canal banks, the protective embankments of the Public Works Department, and the Orissa Grand Trunk road. The damage to houses also was on a larger scale than had occurred previously. Altogether the houses of about 29,000 families were affected in the district of Balasore by the Brahmani floods, and in the most seriously affected portions (about 350 square miles) 62 per cent. of homesteads were damaged. In the Balasore district about 50 lives were lost, nearly half of these fatalities occurring in a group of villages close to Kenduapara railway station. Loss of cattle on a large scale was practically confined to the Bhadrak subdivision, and in that area about 5·6 per cent. of the cattle were lost. The damage caused to standing crops by the floods at the end of July was

comparatively slight, but unfortunately there was a second visitation three weeks later. On this occasion the water took longer to drain away, and in consequence the crops were destroyed or seriously damaged over considerable areas. A portion of the reserve stocks of grain had been carried away by the first inundation, and the resultant shortage was accentuated by the stoppage of railway and other communications. Fortunately, in Balasore and Cuttack, the nucleus of relief organization was already on the spot, as Government were still engaged in the distribution of gratuitous relief in these areas to alleviate distress caused by the floods of the previous year. This relief staff was at once brought into service, and was reinforced by the deputation of more officers very soon afterwards. Centres were opened immediately for the sale or free distribution of rice, and the efforts of Government in this direction were supplemented by private relief agencies. Government prevailed on the steamer company to recommence their service between Cuttack and Chandbali, and undertook to indemnify them against loss on working expenses until railway communication with Calcutta should be restored. This measure helped to keep down the price of food grains which had shown an early tendency to rise. A sum of Rs. 60,000 was sanctioned by Government for gratuitous relief in the two districts, and taccavi loans to the extent of Rs. 2,40,000 were granted to enable the raiyats to repair the damage to their rice crops. In areas where nothing could be done to save those crops, Rs. 40,000 was spent in the free distribution of seeds for *rabi* cultivation. In order to assist the villagers to re-build their houses a grant of Rs. 1,00,000 was made from the Indian People's Famine Trust Fund for free distribution to the poorest classes and Government sanctioned the distribution of loans to the amount of Rs. 5,00,000 for the same purpose. Actually however the whole of this latter sum was not required, the amount actually distributed in loans being Rs. 3,81,000. In addition to the measures taken by Government, non-official organizations and private individuals did invaluable work in alleviating distress. Satisfaction was expressed at the interest taken in the flood problem of Orissa by His Excellency the Viceroy who had arranged to visit the area affected and discuss the question with His Excellency the Governor. Unfortunately the breach in the railway prevented this visit, but His Excellency's sympathy was shown in a practical manner by the assistance given by the Government of India in the appointment of the Orissa Flood Committee.

Floods of minor importance were also reported during July and August from Singhbhum and from North Bhagalpur, where

the Kosi river has taken a further turn towards the west. There was no loss of life in the latter district, and the damage to houses and cattle was small; but the rice crop suffered a good deal, and about Rs. 1,00,000 was distributed in taccavi loans to assist the cultivators in making good their loss. In Singhbhum a couple of villages near Jaintgarh were washed away and the bridge over the Baitarani badly damaged. There was also a severe local inundation at Jamshedpur. But no loss of life occurred, and the damage was made good with the aid of a Government grant of Rs. 10,000.

The Orissa Flood Committee.

In November 1927, the local Government appointed an expert committee consisting of Mr. D. G. Harris, Consulting Engineer to the Government of India, Mr. C. Addam Williams, Chief Engineer to the Government of Bengal and Rai Bahadur Bishun Swarup, late Chief Engineer to the Government of Bihar and Orissa, to investigate the flood problem in Orissa. It was not expected that this committee would provide a ready-made solution of a problem that has baffled individual experts for over seventy years, but it was hoped that they would indicate the direction in which the remedy might be looked for. The Committee met early in 1928 and later in the year submitted their report which is the first authoritative review of the Orissa flood problem as a whole by recognized experts.

The Barh sati case.

Towards the end of November 1927 an amazing incident occurred at Barh, a subdivisional headquarters in the district of Patna, where an attempt was made to revive the practice of *sati*. A young Brahman widow accompanied the body of her deceased husband to the cremation ground on the bank of the Ganges with the avowed intention of sacrificing herself on the funeral pyre. The local police officers succeeded in persuading her to abandon the idea and turn back home, but soon after she was overpersuaded, and the religious frenzy of an enormous crowd, which speedily collected, frustrated the further efforts of the police. She set fire to herself and sustained fatal injuries from which she died on the third day after belated removal to hospital. Ten of the ringleaders in the affair were prosecuted and sentenced to terms of imprisonment varying from one to ten years.

District board elections.

All district and local boards with one exception were reconstituted during the year. The elections were fought largely on political party lines. The Swarajists who, besides being a powerful political party in Council, had secured a majority in most district boards

contested the elections keenly, and supporters both of them and their opponents attended the polls in large numbers. The result was a great reduction in the strength of the Swarajists on district boards.

Royal Commission on Agriculture.

The Royal Commission on Agriculture visited the province at the end of November and spent a week examining witnesses at Patna.

The Provincial Press.

In a province with a population of over 34 millions, there is no newspaper with a circulation of more than 4,000, while few can lay claim to four figures. No paper circulates beyond the province, and the power of the press is thus limited. There are only 5 newspapers of comparative importance published in English. The only daily newspaper, the *Patna Express*, had to suspend publication towards the close of 1927. Communal matters continued to form the principal topic of discussion in both the English and Vernacular Press. The Hindu-Muslim riots at Dinapur and Bettiah were subjects of mutual recrimination between the two communities and of general condemnation of the attitude of the police and officials; the English papers made a genuine attempt to observe moderation in the tone of their editorial comments, but the effect of this was largely negatived by the prominence given in their news columns to all occurrences and speeches relating to communal friction. The vernacular papers on the other hand showed a woeful lack of restraint and, with a few exceptions, indulged in irresponsible and inflammatory comments on every occasion. There is no doubt that these did much harm, reaching, as they do, a much wider and more irresponsible circle of readers. The prospects and personnel of the Simon Commission came in for extravagant criticism. The non-inclusion of any Indian member in the Commission was generally condemned, and the Hindu papers with hardly an exception threw themselves into the boycott campaign. The Muhammadan papers on the whole wavered, with the exception of the *Patna Times* which stood out boldly for a policy of co-operation. Mention of the police was usually by way of criticism, though appreciation was occasionally shown of the efforts of the departmental authorities to instil in all ranks the importance of treating the public with courtesy and consideration.

Changes in the Administration.

Several important changes occurred during the year. On the 7th April 1927 His Excellency Sir Hugh Lansdown Stephenson assumed charge of the office of Governor of the province from Sir Henry Wheeler. On the same date the Hon'ble Mr. E. L. L. Hammond departed

on short leave to England prior to taking up the appointment of Governor of Assam. His place on the Executive Council was taken by the Hon'ble Mr. J. D. Sifton, formerly Chief Secretary to Government and the Hon'ble Maharaja Bahadur Keshav Prashad Singh of Dumraon was appointed Vice-President of the Executive Council. There was no change in the personnel of the Ministers, the Hon'ble Sir Saiyid Muhammad Fakhr-ud-din and the Hon'ble Sir Ganesh Dutta Singh remaining in charge of the Transferred departments of Government.

CHAPTER II.

Finance.

Comparative position of Bihar and Orissa.

Bihar and Orissa is the most recently created of the provinces, having come into existence as a separate unit on the 1st April, 1912. It is also, unfortunately the poorest. Amongst the nine major provinces in India, this province stands fourth in point of area and population. In point of revenue, it stands seventh, with a revenue of approximately Rs. 5½ crores, while all the other provinces, except the Central Provinces and Assam, of which the population is far smaller, have a revenue of over Rs. 10 crores. The following statement shows the incidence of revenue *per mille* of the population in this province as compared with other provinces (British territory) :—

Province.	Revenue per mille of population.
	Rs.
Bihar and Orissa	1,669
Bengal	2,295
United Provinces	2,848
Assam	3,503
Madras	3,911
Central Provinces and Berar	4,036
Punjab	5,380
Burma	7,824
Bombay	8,003

Causes of its poverty.

The incidence in Bihar and Orissa (Rs. 1,669) is, therefore, much less than half of the average of the other provinces (Rs. 4,084). The causes of this are historical and have been mentioned in previous reviews. They are of sufficient importance, however, at this stage of the history of the province to merit recapitulation. Bihar and Orissa is essentially an agricultural country, where 963 of every thousand inhabitants live in villages and where there is only one town with a population of over 100,000 (Patna with a population of 120,000). It would be reasonable therefore to expect that the bulk of its income would be derived from the taxation of land. As in the parent province of Bengal, however, of which Bihar and Orissa previous to 1912 formed an outlying part, the administration

has been handicapped by the permanent settlement of the land revenue, effected by Lord Cornwallis, the Governor General of India, in 1793. This province in fact has suffered even more acutely than Bengal proper from the permanent settlement, owing to the declaration by the Secretary of State in 1880 that, even if the legal right to minerals in permanently settled areas could be established, it would not be desirable to enforce it. The question of breaking the permanent settlement does not come within the range of practical politics. The Government of Bihar and Orissa, therefore, can look forward to no material increase in the land revenue which is the mainstay of other provincial Governments in India, nor in the revenue directly derived from the immense mineral resources which are its peculiar endowment.

Sources of income.

As things stand at present, out of a total provincial revenue of approximately Rs. 5½ crores, over four-fifths are derived from excise (34 per cent.), land-revenue (29 per cent.) and stamps (19 per cent.). The land revenue, as already explained, is to all intents and purposes fixed. Since the introduction of the Reforms, the stamp revenue has been increased from Rs. 87 lakhs to Rs. 107 lakhs, chiefly by increases in the scale of court fees, a policy which, increasing as it does the cost of justice to the public, is not one that can be pursued indefinitely. But the outstanding feature in the history of the provincial revenues in the last few years has been the phenomenal increase in the excise revenue, which has been far in excess of anything that has occurred in any other province in India. By adopting a policy of maximum revenue combined with minimum consumption, the local Government have succeeded, since the Reforms, in combining a decrease in the consumption of excisable articles with an increase of excise revenue from just over 1¼ to just under 2 crores of rupees. It is idle to suppose, however, that this revenue will continue to expand at this rate, and in fact for the last two years the revenue has been stationary with a tendency to decrease. The prices of excisable articles have now been raised to a point at which illicit manufacture and importation are a constant danger. Even if illicit practices can be satisfactorily dealt with, no further marked increase in this revenue seems possible, except as the result of an increase in consumption. It is unthinkable that the local Government should deliberately encourage an increase of consumption for revenue purposes; on the contrary it is the only consideration for the provincial revenues which prevents public opinion from impelling the local Government in the direction of a more drastic restriction.

Mineral wealth.

It may be argued in general terms that there is practically a certainty of Chota Nagpur with its vast mineral resources developing into a most important industrial area, which must make the province richer. But this is a fallacy, for experience has shown that the development of mining in the coal fields, and the development of the steel industry at Jamshedpur have merely added to the liabilities of the province without any addition whatever to its revenues. The development has necessitated a more advanced and a more expensive police and general administration, for which the rest of the province has paid, as the industries contribute nothing to the province in the form of taxation towards the maintenance of that administration. This is due to the peculiar distribution of the sources of revenue under the existing financial settlement, the inequity of which is only now becoming fully apparent

Low standard of expenditure.

The standard of the provincial expenditure is necessarily determined by the standard of the provincial revenue. As in the case of the revenue, the expenditure is lower in proportion to the population in this province than in any other province in India, as the following figures show :—

Province.	Expenditure *per mille* of population.
	Rs.
Bihar and Orissa	1,766
Bengal	2,372
United Provinces	2,513
Assam	3,679
Madras	3,690
Central Provinces and Berar	4,229
Punjab	5,258
Burma	9,156
Bombay	8,277

When Bihar and Orissa still formed part of Bengal, the standard of expenditure in Bengal was lower than in any other province in India; and in Bengal the standard in the districts now included in Bihar and Orissa was little more than half of what it was in the rest of the province. When Bihar and Orissa became a separate province, this unduly low standard of expenditure was taken as the normal and in its turn determined the standard of revenue which it was considered necessary to provide. Thus the

handicap was continued; and the standard both of revenue and expenditure to the population is still, as the above figures show, far lower in Bihar and Orissa than in any other province in India.

Equipping the province.

On the 1st April, 1912, when the province came into existence, it had no capital, no high court, no university, no medical college, and none of those other institutions which are ordinarily found at provincial headquarters. The Central Government contributed Rs. 85 lakhs towards the building of the new capital, and Rs. 57 lakhs towards the High Court, of which Rs. 25 lakhs were for initial charges. The university, the medical college, and the various other necessary parts of the provincial equipment had to be financed by the provincial Government.

In spite of this dead weight, good progress has been made with the task of equipping the province. The non-recurring expenditure on the Capital and the High Court together, has amounted to Rs. 162 lakhs, or Rs. 52 lakhs more than the assignments received for the purpose from the Central Government, while that on the university and the medical college alone has amounted to Rs. 63 lakhs. In addition to this capital expenditure, the recurring commitments have also been increased. Apart from the cost of staffing the new institutions and making the general post-war revision of pay, these increased commitments have chiefly taken the shape of increased recurring grants to local bodies, the principal of which are Rs. 21 lakhs a year for education, and Rs. 4 lakhs a year for medical relief and public health. These developments have been possible solely owing to the remarkable expansion of the excise revenue. The following figures compare the expenditure in the principal Transferred Departments where most of the increase has occurred, in 1921-22, the first year of the Reforms, with the expenditure of the last completed year :—

	(In thousands of rupees.)	
	1921-22.	1927-28.
Education	54,36	86,89
Medical	17,35	29,87
Public Health...	3,31	15,04
Agriculture	8,93	15,36
Industries	2,86	8,93
Total ...	86,81	1,56,09

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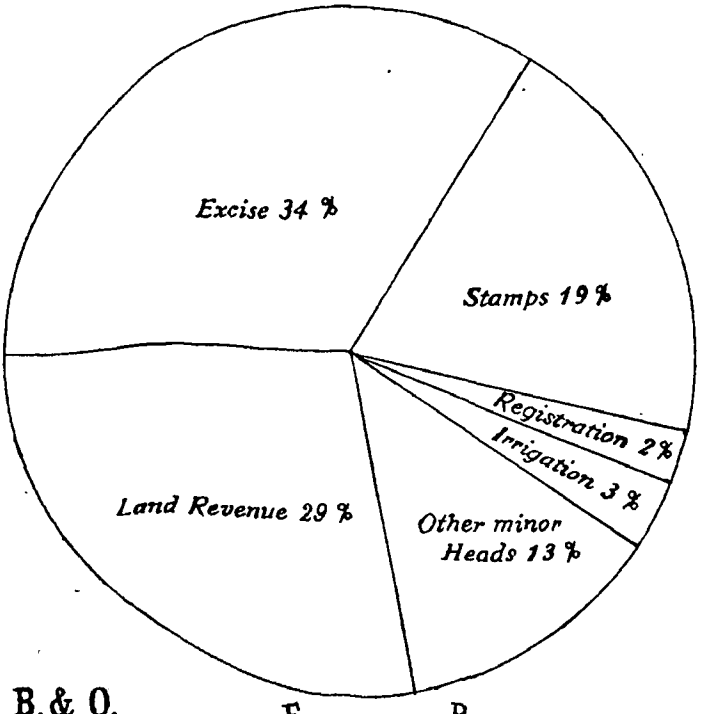
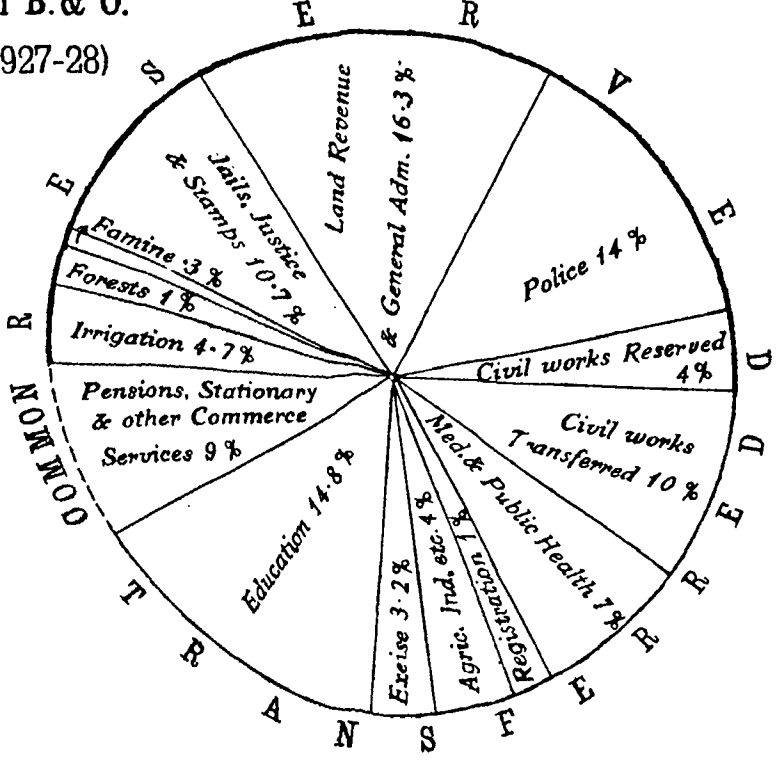
Revenue in B.& O.
(Actuals for 1927-28)



Expenditure in B.& O.
(Actuals for 1927-28)



The next set of figures compares the increased expenditure of Bihar and Orissa during the second of these years, 1927-28, with that of other provinces :—

Province.	Expenditure per mille of population.				
	Education.	Medical.	Public Health.	Agriculture.	Industries.
1	2	3	4	5	6
	Rs.	Rs.	Rs.	Rs.	Rs.
Bihar and Orissa ...	256	88	44	45	26
Bengal	305	128	72	52	29
United Provinces ...	392	77	58	68	29
Assam ...	382	157	160	76	25
Madras ...	514	179	82	82	49
Central Provinces ...	407	114	28	127	21
Punjab ...	753	229	101	264	42
Burma ...	1,040	370	268	158	34
Bombay ...	1,073	260	128	150	5

But it is not only in respect of the Transferred departments that this province comes last in India. For instance, there are fewer police, and they cost less, in proportion to the population than in any other province.

The financial position 1927-28.

When the budget for 1927-28 was presented in March 1927, it was anticipated that the year would be opened with a balance of Rs. 1,82,80,000 of which Rs. 66,03,000 would be the balance of the Famine Relief Fund. As explained in earlier reports, the amount in the Famine Relief Fund could be utilised only for the relief of famine or for its prevention, and on loans granted either for relief purposes or to agriculturists under the Agriculturists' Loans Act and was not available for ordinary expenditure. The total revenue of the year was expected to amount to Rs. 5,67,42,000, whereas the total expenditure debitable to revenue, omitting provision for new schemes of any sort or kind, was expected to amount to Rs. 5,85,21,000, or about 18 lakhs more than the provincial revenue. The province was thus faced with a situation which gave ground for serious thought. In the circumstances, it was obviously impossible to continue the policy of financing new activities on a large scale, and many urgent schemes which it was hoped to initiate during the year, had to be

dropped or postponed. On a full consideration of all the facts of the case, Government decided that it would not be safe to incur new expenditure to the extent of more than Rs. 17¾ lakhs. The major portion of this amount was in the nature of non-recurring expenditure, the ultimate extent of the new recurring liabilities being about Rs. 2¼ lakhs. As a result of this decision it was estimated that, after taking into account transactions under certain capital heads, the provincial balance at the close of the year would be reduced to Rs. 1,44,25,000 of which Rs. 81,15,000 would be in the Famine Relief Fund. The ordinary balance would thus stand at Rs. 63,10,000 or Rs. 37 lakhs less than that with which the province started after the Reforms. In introducing the budget, however, the Finance Member drew attention to certain aspects in the financial situation which made the outlook less depressing than it appeared to be at first sight. But for these encouraging factors, Government would have been compelled to consider whether the time had not come, not only for stopping all fresh expenditure, but also for closing down some of the existing services. In the first place the annual payments of Rs. 11,62,000 to the Famine Relief Fund would cease after 1927-28. This meant that in future; unless the fund was again depleted, the necessity of making these large assignments to the fund would be avoided, and about Rs. 11 lakhs would be available for general expenditure. Secondly, the province was getting towards the end of its repayments to the Central Government of the provincial loan account which was taken over at the inception of the Reforms; so that by 1929-30 a further Rs. 7½ lakhs would be available each year. Lastly, the heavy initial expenditure which was thrown upon the province as a result of its separation from Bengal, had for several years figured prominently in the budget of the Public Works Department. The university, the medical college and the veterinary college were among the most important provincial institutions which, though not yet completed were now well in hand. When once these large items of capital expenditure have been completed, a substantial reduction might be looked for in the " civil works " bill.

The financial position at the close of the year.

The close of the year however disclosed a slightly more favourable position. When the accounts for 1926-27 were finally made up it was found that receipts were Rs. 1,68,000 more, and expenditure Rs. 8,87,000 less, than anticipated. The net result of this was that the opening balance on the 1st April 1927 was now disclosed as Rs. 1,93,35,000 more than Rs. 10 lakhs in excess of the estimated figure—of which

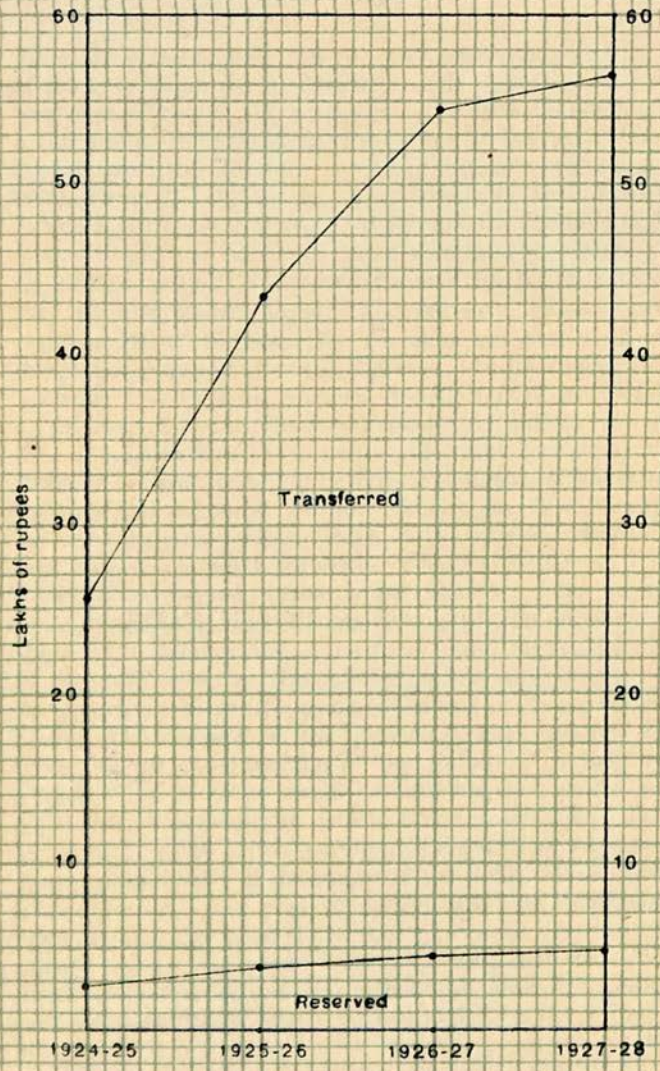
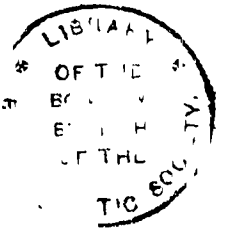


Diagram Showing the ultimate expansion in the reserved and transferred departments respectively that will result from the new projects initiated during the four years 1924-25 to 1927-28.

Recurring expenditure only has been shown.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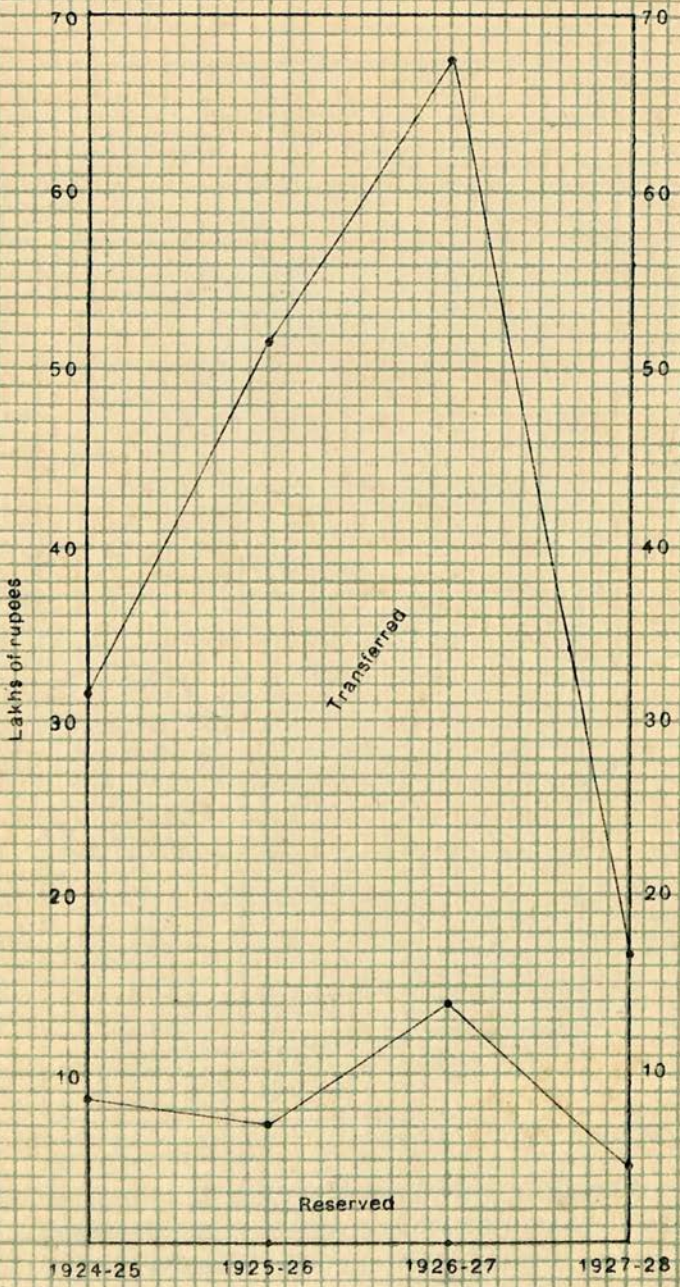


Diagram Showing the total amounts that have been allotted to the reserved and transferred departments respectively for new projects during each of the four years 1924-25 to 1927-28.

Rs. 65,31,000 were in the Famine Relief Fund. The total revenue for the year however was down by Rs. 2,06,000, mainly due to a decrease of Rs. 2½ lakhs in excise receipts. Drought in Bihar, floods in Orissa, and stagnation in the coal industry and failure of the lac crop in Chota Nagpur all contributed to this result. On the other side, it was anticipated that the total expenditure charged to revenue would be Rs. 6¼ lakhs less than originally expected. The largest savings occurred under the " civil works " head, due to progress on the various works under construction being slower than had been hoped. The net result was that the closing balance was estimated at Rs. 165½ lakhs, including Rs. 69⅖ lakhs in the Famine Relief Fund. On this estimate therefore the ordinary balance available at the close of 1927-28 for general purposes would be Rs. 96 lakhs. Details of revenue and expenditure under all heads are given in the abstract of the budget for 1928-29, printed in Appendix III. This shows the budget estimate for 1927-28, the revised estimate at the close of the year and the new estimates for 1928-29.

Division of funds between the Transferred and Reserved Departments.

In accordance with the practice of recent years, most of the funds allocated for new schemes during the year, fell to the Transferred departments. The biggest new item which had been provided in the Budget in the Reserved side was an amount of Rs. 1·07 lakhs for the acquisition and preservation of forests in Chota Nagpur. This demand as already stated, was rejected by the Legislative Council, with the result that the inequality in the division of funds was still further accentuated. The following figures show the distribution of the fresh funds in the budget as finally passed. It will be seen that the Transferred departments secured no less than 75 per cent. both of the recurring and of the non-recurring expenditure.

——	Recurring	Non-recurring.	Total.
	Rs.	Rs.	Rs.
Reserved Departments ...	42,311	3,76,429	4,18,740
Transferred Departments	1,20,933	11,35,978	12,56,911

In this connection the two foregoing diagrams are of interest as showing the generous treatment accorded to the Transferred

departments during the past 5 years. The first shows the total amounts both recurring and non-recurring, which have been allotted to each side of Government from year to year. The second diagram shows the ultimate expansion that will result on either side from the new projects initiated during the same period, recurring expenditure only being shown. The diagrams are self-explanatory and illustrate in a striking manner that the " nation building " departments in Bihar and Orissa are not being starved.

Future outlook.

The position at the end of the year 1927-28, therefore, was that the principal source of revenue (excise) had received a set-back. Land revenue, the second largest head, was, for historical reasons, practically at a stand still. Stamps, the third large head, was showing slow if steady progress. The other revenue heads are of minor importance, but taken altogether they also were showing slow development. On the other hand the local Government had come to the end of the assignments which they were required to make to the Famine Relief Fund, they had almost reached the end of their repayments of the provincial loan account, and they had set their face against new recurring expenditure on any scale. Although therefore they were budgetting for a deficit and proposed to reduce their balance in the course of this year, there was every prospect that the corner would presently be turned and a correct relation established between revenue and expenditure debitable to revenue. But the fact of their extreme poverty as compared with other financial Governments remained, and will remain until there is some fundamental revision of the financial settlement. Until that wished-for event occurs, there is no prospect of incurring fresh recurring commitments on any scale as in the days when the excise revenue was on its upward course.

CHAPTER III.

The Legislative Council.

Sessions of the Council.

Two sessions of the Council were held during the period under review, the first at Ranchi in August 1927 and the second at Patna in January-March 1928. These were the second and third sessions of the third Legislative Council of the Reforms. The Ranchi session was the first held after the assumption of the office of Governor of the province by His Excellency Sir Hugh Stephenson. His Excellency addressed the Council in person on the second day and touched briefly on the Orissa floods, the serious communal rioting and provincial finance. In the course of the two sessions the Council held 29 meetings, of which 10 were wholly and one partly devoted to non-official business.

Legislative bills passed.

There was no important legislation during the year. Two bills were passed into law, both during the second session at Patna in January 1928. The Bihar and Orissa Excise (Amendment) Act, 1927, was a Government measure by which the production of cocaine in this province is prohibited and the age-limit raised for the possession and sale of dangerous drugs and liquors. The bill had been introduced the previous year and by the desire of the Council was circulated and subsequently referred to a select committee whose recommendations were embodied in the bill as passed into law. The other bill, the Bihar and Orissa Opium Smoking Bill, 1928, was introduced by Government and owed its origin to the obligations incurred by the Government of India in ratifying the various instruments adopted by the Geneva Conference of the League of Nations, 1925, to control the traffic in opium and other dangerous drugs. The bill, as passed, directly prohibits opium smoking, an exception being made in the case of addicts who are required to take out licenses.

Other bills.

Ten more bills were introduced, of which 8 were by non-official members. One of the Government bills was the Chota Nagpur Tenancy (Amendment) Bill, 1927, which sought to amend the Chota Nagpur Tenancy Act, 1908, to facilitate the transfer of land required for mining purposes. It was explained that the mining industry necessarily required land for the development of their

property, the erection of machinery, railways, housing of labour and access to the underground minerals, but under the law governing the relations between landlords and tenants, acquisition of land for these purposes is difficult. The land beneath which the minerals lie is in the occupation of raiyats and the law does not allow a raiyat to sell his holding, even if he would. Admittedly the proper remedy was an amendment of the land acquisition procedure to enable land to be acquired for industrial development, as it is at present acquired for public purposes, but this could not be done by the provincial legislature, this being a subject which the Government of India alone could deal with. After some discussion the motion to refer the bill to a select committee was passed by 42 votes to 36. The other Government measure was the Bihar and Orissa Mica Bill, 1927, which aimed at preventing the theft of mica and regulating the extraction, possession and transport of, and trade in, mica. The remedy proposed in the bill was that all mining and all dealing in unwrought mica within the mining area should be under license, and that mica should be transported only under passes and that every person engaged in these trades should keep accurate accounts to show from what source the mica found at any time in his possession, was derived. But without even discussing the question, the Council negatived the proposal to refer the bill to a select committee.

The Bihar Tenancy (Amendment) Bill, 1927, which was introduced in the autumn session of 1927, was perhaps the most important of the private members' bills. This bill was introduced on behalf of the tenants and sought to amend the Bengal Tenancy Act, 1885, by giving the occupancy raiyat the right to transfer his holding, subject to certain conditions, and the right to plant and cut down trees and to appropriate their timber. The Hon'ble Mr. Sifton explained the attitude of Government towards any amendment of the Tenancy Act. Some years before, Government after much discussion and labour had introduced a bill which was to the satisfaction of neither party and was dropped. Government feel that Bihar enjoys the benefit of a Tenancy Act in advance of the tenancy law in force in some parts of India, and will not undertake legislation unless either the differences between landlords and tenants become so acute as to call for intervention, or there is manifested a very strong desire on the part of all concerned to have all the outstanding differences settled, together with a reasonable expectation that an amicable settlement will be obtained. The bill was eventually referred to a select committee on the understanding that the committee would not meet till the landlords had had an

opportunity to introduce a bill embodying their proposals. It was agreed that in that event both bills might be considered simultaneously in committee.

Three bills were tabled to amend the Local Self-Government Act, the first making provision for a separate electorate for Muhammadans and the second and third for the election of an outsider as chairman of a district or local board. It was decided to circulate these for eliciting opinion. A motion to refer to a select committee the Chota Nagpur Tenure-holder's Separate Rent Account Bill, 1927, was negatived by the casting vote of the President, who explained that his action was based on parliamentary procedure that as far as possible the President's vote should not commit the House to any particular line of action. The bill sought to protect the interests of sharers in a permanent tenure from being sold, owing to the default of their co-sharers.

The objects of the Bihar and Orissa Public Demands Recovery (Amendment) Bill were to ensure an automatic stay of execution if an appeal is filed against the order of a certificate court and to make definite provision for restitution where the order has been varied or reversed by a higher court. Despite the opposition of Government, the new bill was referred to a select committee by a majority of three votes.

The Bihar and Orissa Cattle Bill and the Patna University (Amendment) Bill were two other non-official bills which were formally introduced but did not come up for discussion.

Questions and resolutions.

The number of questions asked during the period under report was 544 and the number of supplementary questions was 659 against 529 and 776 respectively for the corresponding period of last year. Sixteen resolutions were moved, of which 5 were adopted, 9 withdrawn and 2 negatived. One official resolution was moved to obtain the sanction of the Council for the grant of a Government loan in connection with the establishment of an Electric Supply Company at Cuttack. This was adopted, with a slight modification, without a division. For the reasons given in the course of the debates Government were unable to accept any of the remaining resolutions adopted. Three out of the four were carried by a majority of one or two votes. The fourth which was pressed to a division and carried by 44 votes to 34 recommended that Government should "purchase hand-spun and hand-woven cloth prepared in the country for office and other use as far

as practicable." It was pointed out by the Government spokesman that the use of *khaddar* would not lead to economy, but would involve heavy extra expenditure and that its use for uniforms alone would mean an increase of expenditure of several lakhs a year. Among the other resolutions adopted, one recommending that regular military training (as distinct from military drill only) should be included in the curriculum of all secondary schools, was carried by one vote only. Another recommended the abolition of toll dues on the Gandak bridge at Sonepur, which the Government of India subsequently refused to agree to. The third which was carried by 14 votes to 12 (the Government remaining neutral) urged the adoption of Urdu as an optional script in the Tirhut, Patna and Bhagalpur divisions. The resolutions which were eventually withdrawn dealt mainly with economic and educational problems and Government succeeded in satisfying the movers of these resolutions that they had taken or would take all possible steps to meet the situation. A resolution that members should have an unrestricted right to speak in English or in any recognized vernacular of the province was defeated by two votes. Considerable interest was taken in this debate, in which Government pointed out that Bihar was a province which contains more languages than any other in India and that the question had been very thoroughly considered by a committee, which included two distinguished Indians, when the Council rules were drafted.

Attack on the Ministry.

In the autumn session of the Council an attack was made on the Hon'ble Minister for Local Self-Government. The main criticism against him was that he had made an improper use of the power of nominating district board members. The debate in connection with the " No Confidence " motion was somewhat half-hearted and the speeches were not very bitter. The attack was unsuccessful, the Hon'ble Minister securing a substantial majority of 54 votes to 37. The only other event of interest was a motion for adjournment of the Council to protest against an expression of opinion of the Commissioner of Excise and Salt in connection with the Mica bill, which was interpreted as involving a reflection on the members of the Council. The motion was adopted without a division.

Budget discussions.

One day was allotted to the presentation and explanation of the budget estimates for 1928-29. The Hon'ble Maharaja Bahadur of Dumraon in presenting his second budget, gave a short but lucid survey of the development of the finances of the province during the previous seven

years. The civil budget estimates on this occasion marked a new departure in that for the first time they were printed by the Finance Department and not by the Accountant-General as on previous occasions. With a homely illustration, the Finance Member explained the financial position, and the precarious margin between the normal expenditure and normal income of the province. He rebutted the charge that his department was being administered on less liberal lines than of old and showed clearly that the scanty funds at his disposal had been carefully distributed and that the appropriations, if voted, would be well spent. The general discussion on the budget was marked by the apparent desire of the Council to form constructive criticism. Disappointment naturally was expressed but the hard facts of the situation were clearly realised and critics chiefly complained that Government was pampering the urban areas to the neglect of the village people. Criticism generally was well informed and showed a praiseworthy grasp of the budget details and of the general situation. Much of the criticism was aimed at the Transferred departments, which were attacked for their failure to deal adequately with problems of sanitation, water-supply and medical relief in rural areas. The expenditure on public works as usual came in for scathing criticism, but police charges got off lightly, though it was considered deplorable that the latter should come in for such a disproportionately large share. In general, it is gratifying to note that members appeared to appreciate the difficulties of Government. So far from pressing for further expenditure regardless of revenue, it was suggested that further recurring expenditure should be stopped altogether. Another member proposed that half the cost of the police should be charged to Central revenues.

Voting of demands for grants.

Thirty-one motions for the reduction or omission of demands were discussed. Sixteen of these were withdrawn in view of the explanations furnished by Government; nine were negatived; and six were carried. Four of these six were motions for nominal cuts, a form of parliamentary practice which was extensively utilised by members of Council during the budget debates. The first drew attention to the closing of the Saran canals. The mover was not satisfied with the explanation of the Government spokesman and the motion was carried by 5 votes. The next motion was a nominal reduction of Rs. 100 also directed against the Irrigation Department. The object of the mover was to place before Government the grievance of the raiyats in respect of the administration of the Son canals, but the debate developed

into a general complaint in respect of other canal systems in Bihar. The appointment of Sir B. K. Mullick, a civilian High Court Judge, to the Executive Council in the vacancy caused by the grant of four months' leave to the Maharaja Bahadur of Dumraon, was the cause of a motion for another nominal cut. The points raised were the propriety of appointing a High Court Judge to the Executive Council and the general question whether a High Court Judge should be employed in an executive capacity. It was explained that Sir B. K. Mullick had already announced his intention of retiring, prior to his appointment and that as regards the general question such an appointment was by no means a new departure. Despite an assurance by Government that there was no intention that the second appointment to the Council should be officialised, and that no sinister motives were attached to the appointment the motion was carried by 7 votes. Another motion, which was carried against Government, aimed at amending the Travelling Allowance Rules to permit members of Council residing within 5 miles from the place of the Council meeting to draw daily allowance. The only demands refused entirely were first, an item of Rs. 11,102—"Reclamation of Magahiya Doms" and second, a provision of Rs. 1,10,782 for the "Bengal and North-Western Railway Police—voted"—both from the police budget demands. The former motion was directed against the management by the Salvation Army of the Dom Settlement at Chauterwa in the district of Champaran, where it was alleged that pressure was brought on the inmates to embrace Christianity. In vain did the Government spokesman assure the Council that their apprehensions were groundless and that no other philanthropic agency could be found in the province to undertake the magnificent, unselfish work which the Salvation Army was doing. Refusal of the demand would mean the closing of the settlement, thus letting loose a large number of unfortunate outcastes, who would prey on society. The motion, however, was carried by the narrow margin of 5 votes. With regard to the motion for the omission of the demand for the Bengal and North-Western Railway Police, it was explained on behalf of Government that the general question in respect of all railways was under discussion with the Central Government and that every effort was being made to obtain more satisfactory contributions. The danger of omitting the provision altogether was pointed out, but the Council apparently considered that this would be the more effective way of drawing the attention of the Central Government to the public feeling in the matter, and by 44 votes to 32, the motion was carried. The whole of the provision for the Bengal and North-Western Railway Police

was subsequently restored by His Excellency the Governor under the powers of certification conferred by section 72-D (2) of the Government of India Act, while Rs. 10,102 out of the demand for the reclamation of Magahiya Doms was similarly certified. Other motions for reduction produced lengthy and interesting debates; in most cases when the question was pressed to a division the voting was close. A nominal cut of Rs. 100 in the excise demand led to the accustomed attack on the excise policy of Government. The debate continued over two days, but brought forth nothing new and finally the motion was withdrawn. An attack on the pay of district sub-registrars unfortunately developed into a protracted debate on communal lines, and the speeches were inclined to be excited and bitter.

Supplementary demands.

Apart from the main budget, 36 supplementary demands and 2 demands for excess grants were placed before the Council during the year. All were carried. Of these only two were pressed to a division, one for a supplementary grant in connection with the construction of an excise warehouse in Palamau, the other in connection with the levelling of old gravel pits in the New Capital area. It is satisfactory to note the absence of obstructionist tactics by the opposition, and the apparent desire to discuss in a businesslike manner all matters relating to the granting of supplies.

CHAPTER IV.

Local Self-Government.

The year under review was the first of the second period of the reformed constitution of district boards and municipalities in this province and presents special features of interest, financial, political and administrative.

The working of district boards.

In the spring of 1924 the boards reconstituted under the new local Self-Government Act of the previous year entered on their duties actuated by a natural and laudable desire to expand and increase the nation-building activities. As the financial situation improved, Government made every effort to help the local bodies to carry out their programmes, and the lion's share of Government's increased resources was placed at their disposal for the expansion of education and medical aid. The new boards elected in 1927 thus succeeded a period of unusual and rapid expansion, rendered possible by large Government grants. This expansion in the fields of education and medical relief had not only swallowed up the whole of Government's recurring grants but also an unduly large share of the ordinary recurring revenues of the boards. The boards found communications starved and no reserve from which new recurring liabilities could be financed. In this crisis Government were unable to help them. Government's own reserves had been exhausted and no new recurring grants and only limited non-recurring grants could be made. In these circumstances the new boards have been not only unable to open many new schools or new dispensaries, to metal more roads, to construct new bridges or to appoint new veterinary assistants; they have in many cases been unable even to maintain adequately the schools and dispensaries already constructed and opened. In some districts schools have had to be closed; and in others, unless the new executives call a halt to the policy of their predecessors and examine carefully their boards' finances, disaster threatens. Balasore and Gaya are bankrupt, the former because its late members sought popularity by a programme of wells and tanks financed by diverting ear-marked grants, and the latter because, presumably for the same reason, the old board indulged, in the words of the auditor, in an indiscriminate increase in the number

of schools, dispensaries, metalled roads, unmetalled and village roads, etc., without regard to the capacity of the board's revenues to maintain them. It is to the credit of the majority of the new boards that they have not succumbed to this temptation. Few, however, if any of them, have yet faced the facts squarely. The task which must be tackled without further delay is for each board to make a thorough examination of its finances and decide how much must be spent in each department for which it is responsible, to keep it in a state of reasonable efficiency. Nor is this the most difficult of the tasks which the new boards have still to face. If there is to be local development their revenues must be supplemented by tapping new sources of income.

The other side of the picture, however, shows a gratifying keenness in the administration by the executives of almost all boards. Very few boards have allowed the political views of their members to obtrude to any important extent on the sphere of their district administration. The spirit of co-operation between local bodies and Government during the year has encouraged the Ministry to appoint an inspecting officer, whose duties will be to get into close touch with local bodies and their executives, to discuss their difficulties with them and to give them practical assistance. No changes of importance occurred during the year except the establishment of a new Sadr subdivision in Manbhum district and the extension to the Manbhum board of the right to elect a non-official chairman.

Local boards and union boards.

There were few important changes in the functions of local boards; but in the Patna and Shahabad districts they were given complete control over primary schools; in the Siwan and Gopalganj subdivisions of Saran district, veterinary work was made over to them; and in the Puri headquarters subdivision, the control over stipendiary schools.

Under the Local Self-Government Act, Government has always been empowered to constitute union committees with powers to deal with certain matters of education, village roads, etc., for small areas. These committees are gradually disappearing since the passing into law of the Bihar and Orissa Village Administration Act of 1922. During the year their numbers decreased from 54 to 31, most of which are in the Patna and Bhagalpur divisions. Their place is now being taken by union boards constituted under the Village Administration Act. One hundred and fifty union boards were working during the year, of

which 128 exercised chaukidari and 88 panchayat powers, which latter include the disposal of minor civil and criminal cases. But, partly owing to the rather haphazard way in which these boards were constituted, partly from lack of supervision and the general absence of practical interest shown in them by district boards and district board executives, and partly because very few union boards taxed themselves, their administrative works tended to be stagnant, and money was often not utilised to the best advantage. These village bodies need careful and sympathetic nursing in the early stages, as experience in Bengal has shown. In Bengal they are supervised by a large body of circle officers, resident within the union board areas; and Government made during the year an experiment on the same lines by sending two sub-deputy collectors for training to Bengal. These two officers were then deputed to Muzaffarpur district which contains the greatest number of union boards. If their efforts are successful Government will endeavour to extend this experiment.

Financial results—income.

The total income of all boards during the year, excluding opening balances, fell by about 20 lakhs of rupees, of which about 13 lakhs is due to a decrease in grants from Government for education, medical relief, communications and water-supply. Owing to the rapid expansion of Government's recurring liabilities since the Reforms and to the inelasticity of the provincial revenues, Government were forced practically to cease from fresh recurring expenditure. The effect on district board finances of Government's inability to assist them with additional recurring grants has been responsible for a serious financial situation affecting almost every board in the province. Since the Reforms, large grants have been made by the Ministry for the construction of dispensaries, in pursuance of a resolution of the Legislative Council that there should be a dispensary in every police-station area. The provincial finances, however, proved incapable of standing the strain and district boards have now, therefore, reached a position from which further advance can be made only by expenditure from their own revenues, which are already in most cases mortgaged up to the hilt on obligatory recurring charges. Though the income of district boards from cess has increased two-fold since the constitution of the province, medical expenditure has far outstripped this permanent increase in income. While the total of ordinary expenditure of district boards has risen by 122 per cent. since the three years 1912—15, medical expenditure has increased by 208 per cent., including expenditure on buildings. Statistics showing the extent of the increase in these grants

since the Reforms are of interest. The figures, in thousands of rupees, are given below :—

——	1912-15.	1915-18.	1918-21.	1921-24.	1924-27.
1	2	3	4	5	6
Educational grants	7,38	9,18	10,57	12,88	21,67
Medical grants	16	21	1,02	2,59	5,49
Civil Works grants	7,10	6,09	7,62	6,48	7,79
For other purposes	67	4	1,22	2	25
Total ...	15,31	15,51	20,43	21,46	41,69

The income derived from local rates, which formed more than half the total income, fell by over six lakhs. Hazaribagh and Manbhum districts were responsible for the only large decreases. The finances of these boards are peculiar. A large part of their cess income is derived from collieries and therefore fluctuates with the state of the coal market. When the collieries were opened and the coal trade flourished, both boards received a large increase in income and increased their commitments accordingly. The subsequent depression in the trade, which is still continuing, was foreseen by neither board, with consequences which have already proved disastrous in Hazaribagh and which will have the same effect on Manbhum unless it profits by the experience of Hazaribagh.

Expenditure.

The total expenditure increased from Rs. 1,56,94,000 to Rs. 1,60,31,000, distributed among the main heads as follows :—

Head	1927-28 in thousands of rupees.	1926-27 in thousands of rupees.	Percentage of total income in 1927-28.	Percentage of total expenditure in 1926-27.
1	2	3	4	5
Civil works	70,63	72,89	47·2	46·44
Education	43,44	40,23	27·09	25·63
Medical relief and sanitation ...	19,36	18,01	12·08	11·47

Out of the total expenditure of Rs. 70,63,000 on civil works, Rs. 7,43,000 and Rs. 4,78,000 were spent on educational and medical buildings respectively. The most important item under civil works is communications on which expenditure fell from Rs. 43·98 lakhs to Rs. 39·54 lakhs, the decrease being on original works. It is interesting to note that expenditure on communications, which are not so popular as educational and medical relief, has increased by only 48 per cent. since the period 1912-15. During the same period educational expenditure has increased by 208 per cent. and medical by 276 per cent. Though expenditure on repairs has thus increased but slowly, the increase bears little relation either to the increased mileage of roads maintained or to the higher cost of maintenance per mile. The mileage of metalled roads maintained has increased from 2,116 in 1921-22 to 2,429 in the year under report, while the average cost of maintenance per mile for the whole province has risen from Rs. 446 to Rs. 462. The mileage of unmetalled roads has increased from 14,607 in 1921-22 to 15,011 this year and of village roads from 9,027 to 9,364 while the expenditure on the repair of unmetalled roads per mile has actually fallen from Rs. 63 in 1921-22 to Rs. 58; and on village roads repair expenditure was only Rs. 41 per mile. The result is that the condition of roads is steadily deteriorating. Enthusiasm for medical relief and education led boards to forget that good communications are vital to district development in every branch and that it is uneconomical to allow existing roads and bridges to deteriorate for want of proper repairs. The growing popularity of motor cars and lorries, however, is leading to an insistent demand for better roads, and reacting to the popular demand, many district boards are beginning to realize the danger of allowing further deterioration and to look about for ways and means of retrenchment to meet further expenditure on communications. But it has now become self-evident that the reaction, which followed the Reforms, against expenditure on communications has gone too far, and that the mortgaging by boards of their recurring income on schools and dispensaries has left no margin for their increased liabilities for communications. Expenditure on original water-supply works decreased from Rs. 4·43 lakhs to Rs. 4·22 lakhs. The decrease is due to the reduction in grants made by Government and would have been much larger if there had not been large unspent balances at the beginning of the year. In the previous seven years a sum of Rs. 10·10 lakhs had been distributed by Government to district boards for water-supply. There are indications that district boards are anxious to extend their veterinary programmes if they can find the money, but this

department also has suffered from the rapid expansion of education and medical relief and expenditure decreased from Rs. 2·45 lakhs to Rs. 2·44. Progress in creating public health staffs has been greatly hindered by the inability of Government to make recurring grants to meet half the cost. In Patna, Muzaffarpur, Hazaribagh, Manbhum and Darbhanga money was, however, found by the district boards and schemes were working during the year. It is greatly to their credit that they have made a start without the help promised to them; and this is one of many indications of the practical enthusiasm of district boards for all forms of medical relief and of their readiness to make experiments.

Closing balances.

Closing balances fell from Rs. 61·34 lakhs to Rs. 44·92 lakhs including deposits, and actual balances fell from Rs. 51·25 lakhs to Rs. 36·32 lakhs. The unspent balances of Government grants amounted to Rs. 12·23 lakhs as compared with Rs. 19·81 lakhs of last year. These heavy balances of unspent Government grants, mainly for educational and medical buildings, were not this year due to the receipt of the money too late to spend it. They were in most cases the balances of previous years and were budgetted for expenditure during the year. That they were not fully spent was due in most cases to causes which might have been foreseen when the budgets were prepared, e.g., delays in acquiring sites, in collecting materials and in giving out contracts, and in a few cases to the realization too late in the year, that expenditure on new buildings would involve a recurring liability which the board's finances could not bear.

The tendency of district boards to budget the whole of their income for expenditure during the year, except the minimum prescribed closing balance has been, Government are inclined to believe, unduly encouraged by the emphasis laid by Government themselves in the past on the desirability of confining closing balances to the amount required to cover two months' average working expenditure. In the last six years, many new factors have arisen to throw doubts on the wisdom of this policy under present conditions; and the collapse of the finances of the Gaya board, the straitened circumstances of all boards, the danger to Hazaribagh and the threatened danger to Manbhum, have convinced Government that a note of warning should be sounded. The subject, however, is a difficult one and is still under the consideration of Government.

Audit.

The administration of the Local Fund Audit Act is still in the experimental stage; but its value is already apparent in the appreciable decrease in illegalities and irregularities generally. Neglect of the ordinary accounts rules and procedure is, as before, the cause of a great many irregularities. Finance committees have not, generally speaking, yet shouldered their responsibilities in exercising supervision over the expenditure and accounts, particularly in the important duty of budgetting. Accounts clerks are frequently not properly qualified for the responsible position which they hold under office bearers, themselves often complete strangers to accounts rules, who are liable to change every three years. The experience already gained has shown that the Local Fund Audit Act was necessary in the interests both of the rate-payers and of the boards and it seems probable that when the first difficulties of administering it smoothly have been overcome, it will no longer be unpopular with the executives of the boards themselves. For the auditor lightens considerably the load of their responsibilities by pointing out the dangerous places and helps them with his advice; nor is there any doubt that the threat of surcharge has acted as a salutary check on the commission of irregularities by boards' employees.

The Audit Department's report shows six municipalities, excluding those which have taken loans, with liabilities exceeding their assets. The finances of two headquarters municipalities in particular continued to be seriously involved. In one of these an audit note of December 1927 showed that Rs. 74,747 had been diverted from ear-marked grants of which about Rs. 30,000 had been diverted in the previous 12 months, previous comment in an earlier audit note having been ignored. In the other the sum diverted amounted to Rs. 32,000. In a third the newly-elected commissioners found bills outstanding to the amount of Rs. 33,000 and Rs. 38,000 taxes outstanding and practically no cash balance. In a fourth, overdue taxes at the beginning of the last quarter of the year under review were equivalent to more than three quarters of the annual demand and the municipal accounts thereof were reported by the auditor to be in a chaotic state. The main defects criticised in audit were general slipshod account-keeping, due often to the inability of municipalities to obtain competent accounts clerks; irregularities in granting remissions of taxes for vacant holdings; excess payments due to careless clerical work; neglect on the part of office-bearers to compare and check the different accounts registers as

required by the rules; and finally, defects due to straitened finances, such as the omission to maintain adequate working and closing balances and temporary diversion of ear-marked grants. Though the number of irregularities included in the surcharge statements of local auditors was heavy, the number of actual surcharges was not very high. There were few appeals and most were allowed.

Municipalities.

Reports on the working of muncipalities during the year were less pessimistic than usual. Several of the smaller municipalities were reported to be managing their administration as efficiently as the limited funds at their disposal allowed. Audit objections were fewer and more attention was paid to the suggestions of inspecting officers. Though in a few cases party factions continued to hamper the administration, there were fewer instances than in previous years; and examples of the subordination of municipal administration to politics were more rare. Also in spite of the general low level of municipal collections there were numerous individual instances of efficient office work. The number of municipalities, including the Patna Administration Committee and the Notified Area Committees, remained 61 as before. There were 52 elected chairmen. There was an increase in the number of meetings which sometimes reached a very high figure. For instance in each of three municipalities there were over 40 meetings during the year. The average attendance of non-official members was generally above 50 per cent., but the attendance of official members was poor.

Income and expenditure.

The aggregate income of the year of all municipalities, excluding opening balances, decreased from Rs. 36·35 lakhs to Rs. 35·69 lakhs. The incidence of taxation per head of population was Rs. 2-1-8 but naturally varied amongst the different municipalities. The main tax, namely the tax on holdings, increased from Rs. 10·19 lakhs to Rs. 10·78 lakhs. Reliable statistics regarding the tax on motor vehicles are not available, but there can be no doubt that many municipalities are losing an appreciable revenue by omission to exploit this growing source. For instance inspecting officers have for some years commented on this avoidable loss to the revenues of the provincial capital. Revisional assessments of the holding tax took place in a dozen municipalities. Government have frequently commented on the necessity for regular and systematic revision of assessments. In one case Government's orders under special powers vested in them under the Municipal Act, were necessary before a revision was effected and in another case there has been

no re-assessment for ten years, though the construction of a municipal market had to be stopped half-complete a few years ago. Even when made, the revisions are not infrequently largely nullified by the appeal committees. In one instance this year they reduced an increase from Rs. 20,000 to Rs. 11,000 and in another from Rs. 3,000 to Rs. 1,000. In two towns revision of the taxes actually resulted in a slight decrease of revenue. The difficulty of carrying out these revisions in a business-like way is, however, a real one.

The total disbursements for the year increased from Rs. 39·44 lakhs to Rs. 39·81 lakhs. The more important fluctuations were increases in charges for office establishment, public safety (including lighting), water-supply, conservancy, roads and education. The divergencies between individual municipalities in the percentage of their expenditure on general establishment was again noticeable. This percentage was between 20 and 15 per cent. in six municipalities, between 15 to 10 per cent. in 17 others and below 5 per cent. in nine municipalities.

Collection of municipal taxes.

The state of tax collections continued to be unsatisfactory. The aggregate arrear demand at the beginning of the year rose from Rs. 4·29 lakhs in the preceding year to Rs. 5·20 lakhs in the year under review and outstanding balances at the end of the year increased from Rs. 5·17 lakhs to Rs. 6·04 lakhs. It is regrettable that there were 23 municipalities whose arrears reached one-fifth or more of their current demand at the end of the year. Two headquarters municipalities (Motihari and Monghyr) closed the year with uncollected arrears amounting to 65 and 80 per cent. respectively of their current demand. Clearly, no municipality can pay its bills at the close of the year if its collections are in such a condition; and it is these arrears of collections which are responsible for the temporary diversion of ear-marked grants, of which nine instances are given in the Audit Department's report for the year under review. It is also unsatisfactory that sufficient distress warrants are not issued, with the result that the only means of realizing these arrears is by the expensive and laborious method of civil suit. One headquarters municipality had to institute suits for Rs. 29,000 owing to its failure to issue warrants in time; another headquarters municipality was found to be allowing about Rs. 2,000 a quarter to become time-barred for the issue of distress warrants with the result that out of a total of Rs. 36,000 only about Rs. 5,000 were recoverable without civil suits. In the same

municipality it has been found necessary to file civil suits covering a sum of Rs. 11,000 for fixed demands for markets and so on.

Outdoor administration.

Conservancy and drainage, the maintenance of water-supplies, the upkeep of roads and public health are the main services for which municipalities are responsible. The inadequacy of the primitive conservancy and drainage arrangements, to which the majority of municipalities in this province are condemned by their poverty, continued to be the subject of criticism by inspecting officers. Up-to-date sewerage systems are, it must be admitted, a practical impossibility in the great majority of towns, for lack of funds and of pipe water-supplies. Even open masonry surface drainage schemes, to be efficient, require, as experience has shown, either a pipe water-supply, or tube wells and pumps for flushing arrangements. The main avoidable defect in conservancy arrangements is the absence of supervision by any reliable officer. The non-official executives are generally busy men and are unable to afford the time for this supervision. Without it, the outdoor work will not improve. Eight municipalities (including the Patna Administration Committee) continued to maintain pipe water-supplies. The Patna-Bankipore joint water-supply is controlled by a committee consisting of the Patna Administration Committee and Patna City municipality with the Superintending Engineer, Public Health Department, as its chairman. Elsewhere the waterworks were run by committees with powers delegated to them by the municipal commissioners. Their administration frequently displayed a woeful lack of business methods; no provision was made for sinking funds to cover depreciation and repair charges and adequate repairs were not carried out of the pumping and purification plants and of the distribution systems, with the result that rapid degeneration and disrepair has in many cases occurred. The state of municipal roads also continued to be the subject of adverse comment. In Patna City, although several miles of the main roads are now maintained by Government, roads continued to deteriorate. There was no regular programme for periodical road repairs, and the municipality continued to employ an engineer with inadequate qualifications. Apart from the difficulty which most municipalities experience in raising funds, the lack of supervision by the executives is the main defect in this branch of the administration no less than in conservancy.

CHAPTER V.

Education.

The supreme importance of education in the social, economic and political life of the people is sufficiently recognized. No real progress in any sphere can be achieved so long as the education of the masses lags behind, and this education of the masses is one of the most vital and difficult problems with which the Government of Bihar and Orissa is faced. In the census of 1921 it was found that in the whole of the province, roughly thirty-two millions out of a total population of over thirty-four millions were illiterate, to the degree of being unable to read or write a simple letter in their own vernacular. Though the number of literates was 200,000 more than it was in 1911, the backwardness of the province in this respect is emphasised by a comparison with the figure for the whole of India, in which there are 7·2 per cent. of the population literate, against 5·1 per cent. in Bihar and Orissa. It is unnecessary to dilate upon the lot of a people in such condition, whose ignorance and credulity are exploited in various directions. The serious obstacle to political progress also which such a condition of affairs offers, need not be stressed.

The problem of universal elementary education.

India has always been criticised on the ground that her system of education has been top-heavy and that its greatest weakness lies in the widespread illiteracy of the masses. In Bihar and Orissa the urgent need for action in this direction has long been recognized by the authorities. The pre-Reforms Government had already taken the first step towards facing the problem of universal primary education by calling, in 1916, on the local bodies for programmes for its expansion. These programmes were approved in 1920. It was not, however, till 1923, that the financial position of the province had sufficiently improved to enable the distribution of Government grants to be placed for the first time on a systematic basis. The district boards were then divided into classes according to their local cess income per thousand of population and the grants were allotted on a consideration of density of population, and to enforce an adequate expenditure by the boards from their own resources. In the two following years the grants were substantially raised so as to enable the approved programmes to be put into effect more rapidly, and in 1924 fresh programmes were called for. The most important questions arising out of

The Patna Museum.

these programmes were discussed by a representative conference in August 1925. The programmes are designed to furnish estimates of the cost of providing elementary education for 80 per cent. of the boys of such ages as would normally attend the infant and lower primary classes, as well as providing facilities for a certain proportion of them to proceed to the upper primary and middle vernacular stages. They are meant to secure that the schools shall be evenly sited, that there shall be one teacher for every twenty boys in sparsely populated areas and one for every twenty-five in the most densely populated, and that the boys will not have to walk more than a mile to lower primary schools. It has been accepted as a cardinal feature of policy, that every lower primary school should have two teachers. Special instructions were issued regulating the conditions under which *maktabs* and *pathshalas* may be opened and aided, and for promoting the education of the depressed classes. The supersession of the system of stipendiary schools, where the master draws a salary without any control except occasional inspection, by schools controlled either by local committees or by the local body directly, was strongly advocated; rates of pay for teachers, favouring trained men, were prescribed, and the principle that one trained teacher should be employed in each lower primary and two in each upper primary school was definitely laid down. Finally it was emphasised that at present no further extension of free education could be accepted, except where the local body is prepared to finance it out of its own resources, since the provision of new schools, the increase of teachers and the improvement of their pay are more pressing needs, and that the time was not yet ripe for any comprehensive scheme of compulsion in rural areas, though proposals for the extension of the Primary Education Act to limited areas would be sympathetically considered. The programmes, which aim at carrying into effect the policy of Government, are estimated to involve a further direct expenditure of Rs. 74 lakhs a year on middle and primary schools, while if education is made free in the primary classes a further Rs. 19 lakhs a year would be required.

The Primary Education Act.

The Primary Education Act to which reference has just been made, was passed in 1919, and enables compulsory education to be introduced on the application of a local body and with the sanction of Government. It is in force, together with free education, in one municipality, Ranchi, and in four rural areas, while schemes for introducing it in three more municipalities are under consideration. In Ranchi, the experiment has been tried since 1921,

sufficiently long to gain useful experience, and the judgment is favourable. Compulsion is effective: 97 per cent. of the boys between six and ten are at school and the percentage of attendance is 78. In no other place has the Act been put into force for more than three years, except in the Banki rural area in Cuttack district. There also the experiment has been successful. Before its inception only 35 per cent. of the boys of school-going age were attending school. In 1927 the proportion had risen to 72, and the percentage of attendance in the same year was 80. Free education without compulsion has been introduced into one entire district, Saran, and in smaller rural areas scattered over three other districts, as well as in two municipalities. In Saran the introduction has led to serious financial difficulties, partly because the compensation due to masters for loss of fees was under-estimated and partly because every village now asks for a school and complains that it is being unfairly treated if it does not get one. In one municipality free education has been followed by a decrease in the number of pupils.

Progress of Primary Education.

It may be claimed, therefore, with some foundation that in Bihar and Orissa a genuine attempt has been made to raise the poor standard of primary education. In recent years the major portion of the extra funds set free for educational purposes has been devoted to primary schools. The result has been a gradual increase in the number of schools and of the pupils attending them. The total number of primary schools of all classes for Indian and European boys and girls increased during the year under review from 30,247 to 30,711 and the number of pupils attending them from 941,675 to 964,762. The direct expenditure rose from Rs. 55·86 lakhs to Rs. 60·94 lakhs. With regard to schools for Indian boys only, the following statement shows the rate at which progress is being achieved :—

Year.	Number of primary schools of all classes for Indian boys.	Number of pupils.
1921-22	22,443	629,590
1922-23	23,078	661,548
1923-24	24,178	715,000
1924-25	26,553	797,170
1925-26	27,681	860,842
1926-27	27,448	875,311
1927-28	27,900	898,218

During the year there was a fall in the number of pupils in five districts, largely as a direct consequence of the decrease in the number of unaided schools which occurred in most districts, occasioned in its turn by inadequacy of funds preventing local bodies bringing such schools on to the aided list. No additional grants for primary education were made by Government, but the total increase in the direct expenditure from public funds amounted to Rs. 3,74,767. In view of the large numbers brought under instruction in recent years, the net increase this year of 22,907 in the number of pupils is not unsatisfactory. The fall in the number of unaided schools which amounted to 293, and occurred in 12 of the 21 districts, is not altogether to be deprecated since many of these spring up in places where they are not required. About half the revised district programmes for the expansion and improvement of primary education have now received the approval of Government. The existence of these programmes is reported to be effecting a gradual improvement in the distribution of primary schools. There is, however, a tendency on the part of local bodies to neglect the more elementary form of primary education for that given in the higher stages, the number of middle and upper primary schools laid down in the programmes having already been attained, if not exceeded, though the districts in question are still far short of their full complement of lower primary schools. There is a persistent demand, with which it is difficult not to sympathise, for more upper primary schools than are permitted by the programmes, on the ground that the education given by a lower primary school does not go far enough to ensure lasting literacy in its pupils. A large number of the pupils of these lower primary schools never get beyond the lowest class and are withdrawn before they have learnt even to read or write. This results in a wastage of both money and effort and leads to stagnation in the progress of instruction. The grave wastage in educational effort is mainly to be judged by the proportion of the total school population to be found in (1), Class I, the infant class, (2), Class III, the highest of the lower primary classes and (3), Class IV, the lowest of the upper primary classes. The percentages of the children in these three classes on the total of the children at primary or secondary schools were as follows :—

—	1922.	1927.
Infant class	71·0	58·0
Highest lower primary class	8·3	12·0
Lowest upper primary class	2·6	4·4

It will be seen that a very distinct impression has been made on this defect, though the situation is still far from satisfactory. Nor can the wastage be adequately checked unless further funds are forthcoming and compulsion is applied after an adequate education has been guaranteed.

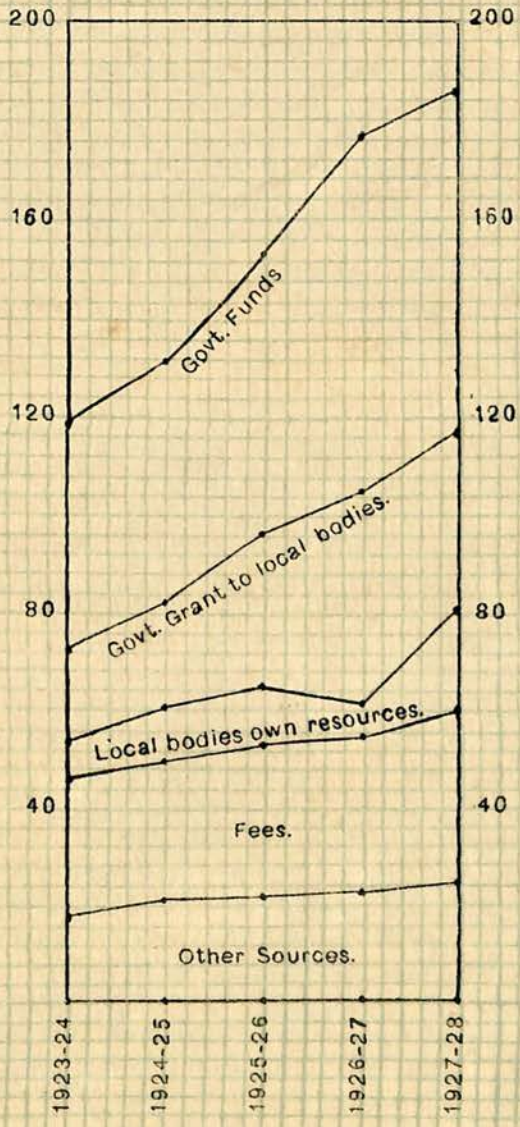
Stagnation.

The evil of stagnation remains a very serious obstacle to the education of the masses on account of its discouraging effect on parents, no less than on pupils. The main reasons for the poor progress made by many pupils are poor teaching, irregular attendance, the admission of very young children and a lack of interest on the part of parents. The existence of a large number of primary schools with but a single teacher, frequently untrained, is not conducive to efficiency. The latest census of such schools, taken since the end of the year, indicates that as many as 21,615 primary schools are staffed by only one teacher. Since Class I nearly always contains at least two distinct sections, with children at all stages of mental development, the single teacher is set an almost impossible task, and not unnaturally devotes himself mainly to the two higher classes, progress in which is more likely to impress inspecting officers. Another trouble is the first admission of children into the lowest class at any time during the year instead of at the beginning of the session. The teacher's energies are thus frittered away in trying to give those in the lowest section of the class individual attention instead of taking them as a class. The combination of the two infant classes to form the present class I has made the task of getting the average child through the course of that class in one year almost impossible. The modification of the curriculum for the primary classes is now being examined and the importance of the more systematic care of beginners is being impressed on all concerned.

Control of Primary Education.

The control of primary education has been transferred by most district boards to local boards, and in some districts, *e.g.*, Shahabad and Darbhanga, this process has been cared even further, the transfer having been made to some of the union boards. It is reported that the powers enjoyed whether by district, local, or union boards, have not, unfortunately, been exercised always with due discretion. Thus some local bodies (and more naturally, vested interests) are reluctant to carry out Government's instruction that each upper primary school should contain two trained teachers, and each lower primary school, one trained teacher. Instances have occurred, also,

Diagram Showing the total expenditure on education in the province and the different sources during the last five years.



of the appointment of teachers for reasons other than their educational qualifications, of their transfer as a reward or punishment in a connection other than educational, of neglect to seek or accept the advice of educational officers in such matters and in granting aid or stipends to primary schools; and of the purchase and distribution of unsuitable prizes. The number of schools managed by local bodies continued to rise and was 2,975 compared with 2,500 in the previous year. It is reported however from one district that little discrimination has been shown in many cases in converting stipendiary into managed schools, the new schools showing no improvement as regards either housing or equipment. The number of Government Schools remained 114, while that of aided or stipendiary schools rose from 20,852 to 21,302. The number of the latter under the control of committees remained small, the system, excellent in theory, being in practice a failure. The various reasons assigned for this include lack of interest and irresponsibility on the part of members of the committees, party feelings, the backwardness of the village people, and dislike of the system by both the teacher and the local body.

Secondary Education.

Including middle vernacular schools, the total number of secondary schools of all classes for boys and girls, both Indian and European, rose from 730 to 778 in the year under review; while the number of pupils, increased from 101,793 to 114,764. Direct expenditure increased from Rs. 32,29,583 to Rs. 34,19,642. In view of the stringency of the financial situation, the progress is not unsatisfactory. Three new high schools were opened during the year, at the end of which there were 24 Government and 85 aided high schools. New buildings for the Patna Collegiate School and its hostel were completed during the year, as also were large extensions to the hostel of the Palamau Zila School. There is an insistent demand for increased accommodation, in both school and hostel, from several other Government high schools. With the assistance of liberal non-recurring grants, school buildings were completed for the Manbhum Victoria High School at Purulia and the Ram Mohan Roy Seminary at Bankipur. The number of Government middle English schools remained 7, but the number of these managed by local bodies rose from *nil* in 1924-25, and 31 last year, to 72, and that of aided schools from 245 last year to 260. The considerable increase (73) in the total number of these schools is partly due to the conversion of several middle vernacular schools into middle English schools; this, too, is the main reason for the decrease (28) in the number of middle vernacular schools. The

Gaya and Manbhum district boards have adopted this policy wholesale and there are now no middle vernacular schools in these districts and in Balasore. There were two additions, viz., the district boards of Saran and Manbhum, during the year, to the number of local bodies which assumed control of the middle English schools in the area under their charge, on the conditions laid down by Government. This policy of decentralisation can be productive of very good results, but it is not clear whether it will be to the ultimate benefit of the schools themselves or of the high schools to which they send pupils. At present there are indications of a tendency on the part of some district boards to encourage the extension and improvement of education at the middle stage, at the expense of primary education. The distribution of middle schools with reference to the needs of the locality is defective in many districts, and the housing and equipment of the majority are very unsatisfactory. As already observed, the decrease in the number of middle vernacular schools is due mainly to the conversion of many of them into middle English schools. There is undoubtedly a wide demand from parents and pupils themselves for increased facilities for English education and it is probable that the process of conversion of vernacular into English schools will continue. This demand is in curious contrast with the demand of public men and of many experienced teachers for a more extended use of the vernacular as a means of instruction. It is, however, not possible yet to form a considered opinion as to the merits of the instruction given to the four highest classes through the medium of the vernaculars. One officer observes that, while there is a general impression that pupils taught in this way obtain a better knowledge of the subjects taught, he could not himself, in the course of a test he conducted, detect any superiority in this respect on the part of either the vernacular or the English sections. He notes further that the majority of the pupils in the vernacular sections were there because they had been unable to obtain admission to the English sections.

The pay and training of teachers.

The expansion of primary education has given rise to inevitable financial and administrative difficulties due for the most part to the inability of Government or of local bodies to provide the additional funds which this policy of expansion requires. Lack of funds is not only retarding a very urgent increase in the number of teachers but is preventing the payment of adequate stipends to teachers and the employment of properly qualified teachers. It is reported that during the year there was considerable delay in the

payment of stipends to teachers in some districts, due to some extent, though not entirely, to insufficiency of funds at the disposal of district boards. For this reason the staffs of many schools in Gaya and Balasore had not at the end of the year received pay for the last two quarters of the year. Inadequate provision for primary education prevented several district boards paying their teachers the minimum stipends laid down for different qualifications and the payment of periodical increments in accordance with the sanctioned scale was of comparatively rare occurrence. The following table shows the average monthly pay of teachers in primary and secondary schools since 1917 :—

—	Secondary schools.	Primary schools.
1	2	3
	Rs.	Rs.
1917	29·2	7·2
1922	37·0	8·8
1927	35·0	10·5

The question of the pay of teachers is one of the greatest importance. The pay of a primary school teacher is barely a living wage and any expansion of primary education is to be deprecated until the profession is made more attractive. Money spent in multiplying the number of schools will be wasted unless, *pari passu*, measures are taken to secure an improvement in the standard of teaching. The figures for secondary schools are somewhat misleading, since separate figures are not available for high school, middle English and middle vernacular teachers and the rates of pay vary greatly between these classes. The increase of institutions of all these kinds was much the same between 1917 and 1922, but from 1922 to 1927 middle vernacular schools, where the pay is lowest, went ahead much more rapidly than the remaining two kinds. It may however be noted that there is very little difference between the minimum rates of pay in high schools, fixed by rule in 1913 and those now prevailing. The difficulty in obtaining an adequate supply of trained teachers of English for secondary schools is a real one.

At the inception of the Reforms there was only one training college in the province, intended to train teachers in secondary schools as well as the lower branch of the inspecting staff. It admitted 40 students for a one-year course. This provision was supplemented in 1923 by a second college at Cuttack capable of training 22 more students. Next come the five institutions for training vernacular teachers in the secondary schcols. The number of trained teachers of this class was 1,639 out of 2,328 in 1922. In all in that year, there were 1,785 or 44 per cent. secondary school teachers, vernacular and English-knowing, out of 4,102, trained for their profession. In 1927, for which year separate figures for vernacular trained teachers are not available, 2,533 teachers out of 5,078, or 50 per cent. were so trained. A substantial advance has been made here, and it must be mainly among the higher grade of teachers. Among the vernacular teachers the principal advance has been in securing a higher standard of general education among the pupils of the training schools.

Lastly there are the institutions for training vernacular teachers for the primary schools. The number of these has decreased from 119 in 1922 to 116 in 1927. These schools have done good steady work in increasing the number of trained elementary teachers from 3,070 in 1912 to 14,928 in 1927. In 1912 less than 13 per cent. of the elementary teachers were trained while now 38 per cent. are trained, although the number of teachers has increased by 61 per cent. in the interval. When it is remembered that the rate of expansion in primary education has depended mainly on the conditions of provincial finance, which cannot be foreseen far ahead, that primary education is for the most part organized through the agency of local bodies, and that an increase of trained teachers means a substantial addition to recurring charges, the increase is gratifying.

Vocational education.

To meet the criticism that education in the province was too literary, action was taken in several directions by Government. The whole question was thoroughly considered in 1922 by a committee on vocational education, and the action taken on their proposals was described in last year's review. Steady progress in this direction, though gradual, is being made. During the year a class in agriculture was opened in the Bikram middle vernacular school in Patna district and classes in carpentry and tailoring were started in a few middle schools in other districts. It is reported however that local bodies are taking little interest in vocational education, other than that, if any, given by the *charkha*. Spinning appears, however,

to be losing popularity in the great majority of districts; the *charkhas*, distributed free and on a liberal scale to schools, are normally lying unused, and the appointment of spinning instructors by district boards has had no appreciable effect; indeed, in two districts such posts have been abolished.

Boy Scout movement.

The Boy Scout movement continues to spread and there are troops in a large number of high, middle and training schools. Good work, including social service at *melas*, bathing ghats and temples on festival days, is being done. It is reported however that there is a regrettable tendency to sacrifice quality to quantity, and difficulty has been experienced in keeping the true scout spirit alive. The companies of girl guides, though inferior in number are, it is reported, on the whole more successful in achieving this object.

The Patna University and its colleges.

The Patna University came into existence on the passing of the Patna University Act of 1917. It was originally intended on the recommendation of the committee which examined the question in 1913-14, to establish the University within the New Capital area, and to make it at once a teaching institution, containing in its own immediate circle six colleges of a purely residential character, and a federal body supervising and testing the activities of affiliated colleges in all parts of the province. The death-blow to this ideal was struck by the Government of India who decided that a substantial contribution, which had been confidently expected towards the non-recurring cost, estimated at one crore of rupees, could not be made from central resources after the inception of the Reforms. The immediate consequences of that decision were the re-opening of the question of site and the indefinite postponement of the assumption by the University of its functions as a teaching institution. Eventually in 1924 a final decision was reached, after a wide ventilation of the subject and protracted debates in the Legislative Council, to abandon the New Capital site and to erect around the existing Patna College the buildings required for the University, and additional collegiate accommodation. Land has now been acquired in that area, and buildings are completed or are in course of erection. Notable among these are the Wheeler Senate House and the New Science College, which is taking over and expanding the science teaching hitherto carried on in Patna College. The Science College, which compares favourably with anything of its kind in India, came into existence on the 15th July 1927. The orbit of studies conducted under the aegis of the University has been widened by the creation

of faculties of engineering and medicine as a result of the establishment of the Prince of Wales Medical College and the conversion of the Bihar School of Engineering into a college. Within the University there are now two colleges, the Patna College and the Bihar National College, primarily devoted to arts, one training college for teachers, the Patna Law College, the Medical and Engineering Colleges, just mentioned, and the New Science College, all located in Patna. There is still however a considerable volume of opinion demanding an immediate change in the character of the University from a purely federal one, to one which undertakes teaching as well, and the question is now being examined. Of external colleges to which the supervising and examining functions of the University extend, there are now the Ravenshaw College at Cuttack, the Greer Bhumihar Brahmin College at Muzaffarpur, the Tej Narayan Jubilee College at Bhagalpur and St. Columba's College at Hazaribagh, of first grade institutions; together with colleges with intermediate classes at Ranchi, Monghyr and Bihar, and the Ravenshaw Girls' School at Cuttack, while there is now a training college at Cuttack. In all these, much progress has been made during recent years in extending the range of teaching and in increasing the number of pupils, as well as in the provision of better buildings. Indeed, the equipment of most of the colleges now leaves little to be desired. It is satisfactory also to note that the financial position of the University continues sound. There was no increase in the number of arts and science colleges during the year, but there was a redistribution as between first and second-grade colleges, the former now numbering seven and the latter four. In July 1927, the old Patna College, at which both arts and science courses were taught, was divided into the present Patna College for arts only, and the Science College. At the same time New College ceased to exist and its intermediate arts classes were transferred to Patna College, from which they had been removed eight years previously. The increased accommodation enabled them to admit larger numbers of students, but neighbouring colleges all showed a fall in numbers, probably as a direct consequence. On the whole, the number of students in first-grade colleges apparently rose from 3,076 to 3,364, and in second grade colleges for men, fell from 391 to 212, but in both cases the difference is largely accounted for by the transfer of the intermediate arts classes at New College (containing 212 students in 1926-27) to the new Patna College, there being in fact a slight increase in students in both first and second grade colleges. The direct expenditure on all the colleges rose from Rs. 9,80,551 in 1926-27 to Rs. 10,50,168 this year.

Female Education.

Female education in the province is still in its infancy. Progress, though slow, continues and may be considered satisfactory in view of the serious obstacles, mainly social, which block the way. The following figures are of considerable interest as showing the advance made since the formation of the province :—

—	1911-12.	1921-22.	1926-27.
1	2	3	4
Percentage of girls at school to girls of school-going age.	3·3	4·1	4·6
Direct expenditure on public instruction for females (in thousands of rupees).	2·28	5·84	7·61
Number of institutions for Indian girls.	1,480	2,570	2,971

During the year under review there was a slight increase in the number of educational institutions for girls and of the girls under instruction, though incommensurate with the importance of the subject. The former rose from 2,971 to 2,978 and the latter from 118,298 to 121,164, the latter increase being due mainly to the rise (from 46,969 to 49,105) in the number of girls reading in boys' schools. The expenditure on public institutions, too, increased slightly, and was due for the most part to a rise in the expenditure from municipal funds from Rs. 56,837 to Rs. 62,612, which would appear to indicate that district boards, the expenditure from whose funds actually decreased, are less progressive in this matter than are municipalities. There are signs however of a greater demand for the education of girls, stimulated perhaps by such Women's Associations as those at Patna, Cuttack and Ranchi, one of the main objects of which is the furtherance of female literacy, but progress is greatly hampered by want of funds and of qualified women teachers, as well as by social customs. The want of trained teachers is seriously felt, and in the course of the year a special scale of pay was sanctioned by Government for trained women matriculates in the Vernacular Teachers' Service. Even this however failed to attract the teachers required.

CHAPTER VI.

Public Health and Medical Relief.

The organization maintained by Government for the preservation and protection of the health of the people is in three parts. The Medical Department is concerned with the provision of medical relief throughout the province, and thus with the establishment and working of medical institutions and the training and registering of medical practitioners. The Public Health Department is a separate department and has two branches; at the head of the first, the medical branch, is the Director of Public Health, while the second, the engineering branch, is under the direction of the Superintending Engineer.

The Public Health Department: its expansion.

The main responsibilities of the medical branch are the prevention of epidemics and infectious diseases, and the propagation of knowledge about the general principles of hygiene, sanitation and cleanliness. When the province was created, the superior staff consisted only of the head of the department and one other officer, but two others were immediately added in 1912. In the following year health officers, paid for by Government, were appointed in twelve of the larger municipalities and a sanitary school was opened for the training of sanitary inspectors; while in 1914, a Public Health Laboratory was started for the analysis of water, which was subsequently equipped to analyse food samples also, and a depôt was opened for the manufacture and distribution of vaccine lymph for provincial needs. In 1919-20, a Public Health Bureau in charge of a special officer was started, and the staff of the department enlarged further by the appointment of five school medical officers and a temporary cadre of epidemic doctors. This staff was further increased in 1922 by the formation of a temporary cadre of the epidemic doctors of higher qualifications, as well as a cadre of vaccinators, whose services could also be utilized for epidemics and preventive work in the districts. In 1926 a permanent Public Health cadre was created incorporating the school medical officers, the health officers, and the epidemic doctors. Thus the department has grown from the two officers in 1912, to its present dimensions of a director and three assistant directors of public health, two

officers in charge of the bureau and the vaccine depôt, a chemical analyst, five school medical officers, three health officers of whom one is employed under the medical department as a leprosy expert, one lady school medical officer and ten epidemic doctors, twenty-six permanent officers in all, as well as six temporary epidemic doctors, all of whom are qualified members of the medical profession. There are also the vaccinators who have no such qualifications.

Local health organizations.

Not only has the staff been increased as indicated above, but the duties of the department have expanded and to a great extent changed within the past seven years. One of the chief problems with which Government have been faced in the matter of public health is the difficulty of co-ordinating the various authorities amongst whom the responsibility for public health is now distributed since the passing of the amended Local Self-Government Act and of the new Municipal Act. Before the Reforms, preventive and remedial measures for dealing with epidemics were taken by the Civil Surgeons, acting in co-operation with the district officers, who were then chairmen of the district boards and in close touch with the Public Health Department. The new legislation consequent on the Reforms necessarily altered the system of control. The non-official chairmen of district boards and municipalities no longer have the prestige of a magistracy behind them, and the civil surgeons, though they are still expert advisers of district boards, are not under their control, nor are the subdivisional officers in such direct touch with a non-official chairman as they had been with the official chairman. District boards began to feel the want of a medical organization of their own, independent of civil surgeons, and a scheme was drawn up in 1924 for supplementing Government's public health staff by the creation of a staff of health inspectors and subordinates appointed by each district board under the control of a health officer holding a diploma of public health, also appointed by the district boards. The intention was that district board organizations should take over the primary responsibilities of public health in the districts, and that Government's public health organization should become a co-ordinating, supervising and controlling authority as in England. Government hoped to be able to bear about half the cost of this local public health staff and thus to be able to exercise due control over the district boards by the power of the purse. Unfortunately lack of funds has made the provision of this financial assistance impracticable except for the three Orissa district boards

which are by far the poorest in the province. The staff of the Director of Public Health has, therefore, been working under serious difficulties. There has been an enormous increase of inspection work, for municipalities have been unable to afford to maintain qualified health officers, and most district boards have been unable to finance their public health organization schemes. The staff of the Director of Public Health has also undertaken the new responsibility of inspecting high schools, and the expert advice and supervision of the Assistant Director of Public Health have been required to an increasing extent at big cattle fairs and similar gatherings, while their responsibility for coping with epidemics has been complicated greatly by the factors mentioned above. The district board health organizations are still in their infancy and do not yet provide an adequate means of tackling epidemics or dealing with the general problems of public health. They were subsidized during the year in only three districts and existed in only nine districts in all. No blame however can attach to district boards for the comparatively slow rate of progress made in establishing health organizations, and Government are giving their earnest consideration to the problem. It remains for district boards to display the same enthusiasm for preventive as they have for curative medical relief, and to give due weight to the consideration that even if this involves a curtailment of their programme of establishing new dispensaries, little further progress can be made without a district public health staff, in stamping out the diseases which take the heaviest toll of human life, such as cholera, smallpox and plague.

Public health measures in most of the municipalities of the province are in an unsatisfactory state. The cost of the conservancy staff has gone up, while municipal revenues have shown no corresponding increase, and such increase as there has been, has tended to be diverted in other directions. The provision of pipe water supplies is a primary necessity of public health, and in this direction there has been some progress, the rate of which, it is hoped, will increase in the near future with the assistance of the special mechanical engineer whom Government have decided to appoint. But only three municipalities maintain health officers out of their own funds, apart from the three large towns of Patna and Puri, where Government pay the salaries of the health officers, and Gaya where the Lodging House Committee meet his salary. The improvement of conservancy and general public health measures lies now with non-official municipal commissioners and their earnest attention has been invited to the importance of this

problem. The Jharia Mines Board of Health continued during the year under report to show what can be done in this direction. There were only 70 deaths from cholera, small-pox and influenza in Jharia, amongst a colliery population of about 1,26,000.

General health statistics in 1927-28.

The general health of the province during the year was comparatively good. The number of births increased from 1,264,174 to 1,282,861, while deaths decreased from 855,667 to 849,260. The death rate per mille showed a satisfactory decrease from 25·2 for the corresponding period of the previous year, to 24·9, as compared with the decennial average of 326. There was a slight decrease in the number of deaths from smallpox but a fairly marked increase in the death rate from cholera. The birth rate was 37·7 per mille against 37·2 in 1926-27, and is above the average for the previous ten years which was 35·8. The excess of births over deaths was 4,33,601. The highest death rates recorded in the various districts were in Balasore (33·3), Shahabad (30·9) and Palamau (30·2). Balasore suffered badly from floods in 1925 and 1926, which both impoverished the people and resulted in an increase in the number of cases of malaria in the affected areas. There was also a sharp outbreak of cholera in this district early in the year, but this was not connected in any way with the floods. In the Shahabad district a very severe epidemic of cholera occurred in May, June and July, and the high death rate may be ascribed largely to this cause. The healthiest towns in the province, judged from the statistics, were Dhanbad, Ranchi and Purulia, with death rates of 4·2, 6·4, and 7·1 respectively. The rate of mortality among infants, though still excessive, fell from 147·7 per thousand births in 1926 to 133·4. As in previous years, the mortality amongst male infants was high, 190·0 of every thousand failing to survive the first year of life, against 158·8 of female infants. It is perhaps unnecessary to point out that birth and death statistics in India are only approximate. In urban areas registration is compulsory, but in rural areas the figures are reported by the village chaukidar on his weekly visit to the police-station. Efforts are being made to increase their accuracy both by the vaccination staff and by the local police officers, who verify the statistics in a large number of villages each year. The department continued to publish every week the vital statistics of all the towns in the province with a population of over 20,000. Weekly epidemic reports showing the number of seizures and deaths from cholera, smallpox, plague, and influenza in the districts were also collected, summarized and circulated.

These reports are published in the Government Gazette, and also by the courtesy of the management, in several newspapers of the province. By the publication of these statistics it is hoped to keep the public informed of the actual state of health of the large towns and of the prevalence of diseases in the districts, and to demonstrate the utility of vital statistics.

Comparative Incidence of chief diseases.

The following statement compares the ratios under the chief heads of mortality in 1927 with the average ratio of the previous ten years :—

	Urban.		Rural.		Combined.	
	Ten years' average.	1927.	Ten years' average.	1927.	Ten years' average.	1927.
1	2	3	4	5	6	7
Cholera	2·1	1·4	2·0	1·4	2·0	1·4
Smallpox	0·6	1·1	0·3	1·0	0·3	1·0
Plague	1·6	0 07	0·6	0·2	0 6	0·2
Fever	15·1	10·8	22·7	16·6	22·5	16·14
Dysentery and diarrhœa	1·6	1·1	0·8	0·6	0·8	0·6
Respiratory diseases ...	0·8	0·7	0·2	0·1	0·2	0·2
Injuries ...	0·6	0·5	0·4	0·3	0·4	0·3
All other causes	8·0	6·8	5·5	4·7	5·6	4·8

It will be noticed that there is a remarkable difference in the distribution of disease in urban and rural areas. The infectious diseases, the spread of which largely depends on overcrowding, density of population, and the consequent facilities for infection, are consistently more prevalent in the towns, whereas fevers, of which malaria is the chief, are more prevalent in the rural areas, where the facilities are greater for the breeding of anopheline mosquitoes, and where the economic condition of the people is frequently not so good. The large towns are hot beds of consumption, and this disease, together with pneumonia and influenza, causes the death rate from respiratory diseases to be many times greater than in rural areas.

Cholera.

A serious cholera epidemic appeared in the Shahabad and Monghyr districts in May, and spread to Muzaffarpur, Darbhanga, Gaya and Bhagalpur, and cholera accounted for 49,022 deaths throughout the province. Special instructions were issued to the district boards to utilize the services of the medical officers in charge of dispensaries

for disinfecting wells, and the services of the school medical officers and their assistants were also utilized during the epidemic as a special measure. But until all district boards can afford to maintain health officers and a special public health staff, and until the systematic disinfection of the water-supply is carried out before an epidemic breaks out, as well as after it has started, the usual preventive and curative measures can touch only the fringe of the problem. Special steps were taken during the year to popularize anti-cholera inoculations and the number of doses issued from the Vaccine Depôt increased from 5,790 to 38,566. Subsequently a sum of Rs. 10,000 was provided in the budget for the free distribution of cholera vaccine to civil surgeons and local bodies throughout the province. Special efforts were made to prevent the outbreak and spread of cholera at Puri during the *Snan Jatra* and *Rath Jatra* festivals. A special staff of medical officers was deputed to the railway stations of Balasore, Cuttack and Puri and to various centres in Puri town, and inoculation centres were also established with the co-operation of the Government of Bengal at Howrah and Kharagpur. No less than 12,618 inoculations were performed at the three towns in Orissa, and it is satisfactory to know that only 33 cases of cholera occurred during the period of these two festivals. The feasibility of developing special measures at fairs and particularly among pilgrims is being explored.

Smallpox.

The epidemic of the previous year in Puri, Cuttack and Balasore was repeated this year, and was also severe in the three districts of the Patna division. As smallpox can be prevented comparatively easily by periodical vaccination, the recurrence of these epidemics should not be accepted as a matter of course, and the improvement of the present arrangements for vaccination is under consideration. At present vaccination is compulsory only in municipal areas, and in a few districts and parts of districts to which the Bengal Vaccination Act has been extended recently as an experimental measure. During the year Government have consulted all district boards regarding the feasibility of introducing compulsory vaccination throughout the province. The replies were on the whole not encouraging, but the difficulties are probably mainly financial, and the problem is receiving careful consideration.

Fever.

Over half a million deaths from fevers were registered in the province during the year, out of a total number of 853,024 deaths from all causes. The term "fever", however, includes a varying percentage

of all diseases where fever has been a symptom, and is by no means a true indication of the amount of malaria, fever of the enteric group, or the short fevers peculiar to tropical countries. The village chaukidar by whom the bulk of the deaths are reported is unable to distinguish malaria from any other fever. From the results of a spleen census of children, however, it is certain that malaria is prevalent in most districts of the province. Very little has been done up to now to control and check malaria and the evil effects of this disease do not appear generally to be appreciated. The sale of quinine, despite a reduction in price, has steadily decreased during recent years.

Plague.

Plague was not serious during the year except in Muzaffarpur and Darbhanga districts, and its effects on public health were almost negligible compared with those of cholera and smallpox. Cases occur regularly in these two districts during the winter months, and so long as this happens there is always a risk of its assuming epidemic proportions. In the Muzaffarpur district the people have learnt to appreciate the value of anti-plague inoculation and a large number of people are inoculated every year.

Dysentery and diarrhœa.

As in recent years these diseases were most prevalent in Orissa, where 16,156 deaths were reported, out of a total of 20,377 for the whole province. The prevalence of dysentery and diarrhœa in Orissa is probably associated with the climatic conditions and natural calamities and is due to a large extent to the bad state of the water-supply in many parts of the division. Malaria fever is also very prevalent in Orissa, and its victims are rendered weak, debilitated and anæmic, and less able to resist subsequent attacks of these more fatal diseases.

Food Adulteration.

The administration of the Food Adulteration Act continued to be unsatisfactory. Although of the samples sent to the Government analyst, 39 per cent. of the samples of *ghi*, 24 per cent. of *ata* and flour and cent per cent. of those of milk were found to be adulterated, no systematic action was taken by the municipal commissioners throughout the province, in whose hands the administration of the Act lies, to punish the sale of adulterated articles of food; and the Act therefore continued to remain almost a dead letter. Government are considering the prescription of a standard for tea, of which adulteration is believed to be prevalent, and with this object, analytical tests are being made of the various brands of cheap tea sold.

Water-supply.

The importance of a pure water-supply in the prevention of certain diseases is sufficiently recognized and schemes are being developed as quickly as funds permit. During the past seven years a sum of Rs. 10,10,000 has been distributed by Government to district boards to assist them in sinking wells where they were needed. Meanwhile the towns have not been neglected. The Patna-Bankipore pipe water-supply was constructed originally by the Public Health Department and is maintained by it, as a contribution work. There is an important water-supply scheme for the Bhagalpur municipality where new pumping plant will shortly be installed. The scheme is being financed from Government grants and a loan and the department is in charge of the construction work. It is hoped that before long water-supply schemes will be practical politics in Puri and other towns. Previously existing waterworks are also found to require increasing supervision and a scheme has been approved for the creation of a new Mechanical Division with a mechanical engineer at its head. His main duties will be to supervise and control the maintenance of pumping installations in Government institutions and to assist the Superintending Engineer in the supervision of all municipal open waterworks. The department's portable pumping sets were lent free of cost for use at the Sonepur fair. The plant worked satisfactorily but the yield of the wells was inadequate. A scheme for the improvement of the water-supply at this fair has been prepared since the close of the year at a cost of nearly a lakh of rupees and is receiving consideration. The general features of the administration of municipal waterworks revealed by the inspections of the Superintending Engineer are that the technical staff are frequently not qualified for their work. The result is that the plant often falls rapidly into disrepair and the maintenance charges are heavy. Owing to the lack of metering there is a very considerable wastage in the water-supply and as a result the waterworks are not the financial success which they ought to be.

Hospitals and dispensaries.

There were 658 hospitals and dispensaries of all classes in the province at the close of the year 1927. Thirty-three new dispensaries were opened during the twelve months, while eight were closed down, of which three were maintained by district boards, three were private non-aided institutions and the remaining two were maintained by railway companies for the convenience of their staff. The female section of the Bihar hospital in the Patna district was separated from the main hospital and constituted

under a joint committee, under the name of the Amawan Zanana Hospital. The building for this hospital was constructed with the help of a generous donation from the Raja Bahadur of Amawan. At the Patna General Hospital a new hospital for women was opened in February at the cost of Government. The total number of patients treated at the various hospitals and dispensaries during the year was 6,042,169 against 5,835,692 in the previous year. The number of surgical operations rose to 410,587 of which more than 95 per cent. were successful.

Medical relief in rural areas.

The provision of medical relief in rural areas is in the hands of the district boards and since the Reforms large grants have been made by Government for the construction of dispensaries in pursuance of a resolution of the Legislative Council that there should be a dispensary in every police-station area. Mainly as a result of these grants no fewer than 132 new buildings have been constructed since the year 1920-21; 93 more were under construction at the close of the year and 229 new dispensaries have been opened of which 98 are still housed in rented buildings. But the provincial finances have proved incapable of standing the strain of any further increase in their recurring liabilities either by new recurring grants to district boards or by provincializing *sadr* hospitals, and Government have been unable even to continue to make non-recurring grants on the same scale as before. During the year under report Government's contribution fell from Rs. 6·94 lakhs to Rs. 3·49 lakhs and the district boards' receipts under the head "medical" showed a corresponding fall from Rs. 7·57 lakhs to Rs. 4·24 lakhs. There is also no immediate prospect of Government being able to increase their recurring grants for dispensaries in the near future. District boards have therefore reached a position from which further advance can be made only by expenditure from their own revenues, but the condition of the finances of most boards is such that in many cases they cannot even keep up the dispensaries already in existence. A suggestion of Government circulated to district boards for opinion that the dispensary rules might be altered to allow small fees to be charged for prescriptions received practically no support. Actually two district boards discontinued their contributions to a dispensary which had made this experiment to make itself self-supporting. Private contributions amounted to Rs. 62,859, which though an improvement over last year is still insignificant. The inhabitants of the Patna division cannot be congratulated on their contributions which amounted to

only Rs. 1,170. Ayurvedic and Tibbi dispensaries were maintained by several boards and Government have, since the close of the year, issued rules regulating their administration and control.

Treatment of special diseases.

Special grants were made by Government for the treatment of kala-azar and venereal diseases which are prevalent in the province and a special scheme for combating the latter has been sanctioned as an experimental measure for one year. Filariasis (elephantiasis) and ankylostomiasis (hookworm) are diseases which are also widespread throughout the province. In addition to the research work which continued to be carried out at the filariasis hospital at Puri, an investigation of the disease under the auspices of the Indian Research Fund Association, Simla, was undertaken by Captain Korke of the Central Research Institute, Kasauli, with Gaya as its centre. Good progress has been made with the construction of the sanitorium at Itki near Ranchi, for the treatment of tubercular disease and it is hoped to open this sanitorium in April 1929. Arrangements are also well in hand for the staffing and equipment of the Pasteur Institute at Patna. Ideas are changing regarding the best methods of dealing with the problem of leprosy. It is now established that lepers at the late incurable stages are not of any appreciable public danger. They are practically non-infectious and it is considered that the only effective way of tackling leprosy relief is by the setting up of clinics for treatment of cases in the early stages of the disease. A scheme for propaganda and treatment on these lines has been sanctioned by Government since the close of the year. A special staff of doctors will visit and survey the districts in which leprosy is known to be prevalent; they will open leprosy clinics for outdoor treatment of the disease and will train the local doctors to carry on the work after their departure. This staff, if Council vote the funds, will be entertained next year. At present there are eight leper asylums and five clinics in the province.

Medical education.

The Prince of Wales Medical College, Patna, has now been in existence for over three years and continues to show satisfactory development. The College is now well-equipped and the Physiology department, when finished, will be a model of well-considered efficiency. There were 195 students on the rolls and satisfactory entries still continue. Members of the Health Committee of the League of Nations visited the College in January and commented favourably on the standard of teaching. The report of the President

of the General Medical Council of England, who visited the College in January 1927, has received the close consideration of the Inspector-General of Civil Hospitals and the Principal and staff of the College. Their recommendations are now under the consideration of Government. The two medical schools at Cuttack and Darbhanga were working satisfactorily during the year and turned out 78 qualified medical practitioners and 63 trained compounders.

Radium Institute.

Despite the fact that radium treatment is now available at Calcutta, Madras, Bombay, Indore and Dehra Dun, the number of patients continues to increase and the All-India character of the institute is being maintained. After the close of the year the institute was transferred from Ranchi to Patna, where treatment will be carried out more advantageously in conjunction with specialist physicians and surgeons. With the institute attached to the Medical College facilities are available for teaching students the use and value of this important therapeutic agent. Two hundred and forty-three new patients were treated at the institute during 1927, while 37 more were examined but not treated. Despite the fact that in many of the cases treated the disease was already in an advanced stage, 42 were eventually pronounced to be clinically free from manifestation of disease, and 19 were definitely declared cured. The cases of 80 others were reported to have improved.

Mental Hospitals.

The Mental Hospitals at Ranchi for Indians and Europeans continued to have almost more work than they are able to cope with. In the European Hospital a building for the occupational therapy of both sexes was completed during the year and suitably furnished and equipped. Vegetable and fruit gardens have been laid out, and no effort is being spared to make the hospital a model of its class. A managing committee has been constituted for the Indian Mental Hospital consisting of members representing the Governments of Bengal and Bihar and Orissa. The hospital provides accommodation for 1,286 patients, but overcrowding is still serious. The hospitals were visited during the year by members of the Health Committee of the League of Nations who commented favourably on the administration and equipment of the institutions.

CHAPTER VII.

Maintenance of the Peace and Administration of Justice.

The expenditure on the police force during the year 1927-28 was Rs. 82,73,136 as against Rs. 82,68,642 for the previous year. Unlike expenditure in many other departments, police expenditure since the introduction of the Reforms has remained practically stationary, and in consequence much-needed improvements in methods, equipment and conditions of service have been deferred, and increased forces cannot be provided to meet increased demands. The figures in thousands of rupees of actual expenditure since 1921 are of interest :—

	Rs.
1921-22	81,31
1922-23	80,11
1923-24	79,29
1924-25	80,69
1925-26	82,22
1926-27	82,69
1927-28	82,73

The total strength of the force, including the Imperial police, was 14,422 officers and men, upon whom rests the responsibility of maintaining law and order in an area of 83,161 square miles. Taking the whole of the province the proportion works out to one policeman to every 5½ square miles, or one to every 2,372 souls, a combined proportion which is less than in any other province in India. Even the most vehement critic of Government or the police must admit that the maintenance of law and order in Bihar and Orissa is achieved at an exceptionally small cost. If this low figure of expenditure nevertheless absorbs 14.6 per cent. of the annual income, the reason is to be found in the smallness and inelasticity of the provincial revenues. The constabulary in Bihar and Orissa draw from Rs. 15 to Rs. 20 a month only; head-constables according as they are literate or illiterate Rs. 25 to Rs. 35 and Rs. 24 to Rs. 30 respectively; sub-inspectors from Rs. 80 to Rs. 130; and inspectors from Rs. 175 to Rs. 250 with

selection grades for 10 per cent. of the number on Rs. 275 and for 5 per cent. on Rs. 300. It is difficult for an impartial critic of these scales of pay to sympathize with the charge so often made that the police are overpaid. Peaceful progress in each phase of social evolution is impossible without an efficient instrument for enforcing the various regulative laws which accompany it. It is not a question whether, in Council parlance, the police are more important than education, medical relief, etc. They are an all-important part of the structure of every civilised Government, without which the structure must inevitably collapse.

Relations with the public.

That the question is coming to be regarded in its proper perspective is apparent from the improved tone of the Legislative Council debates, and though much remains to be done before the force is adequately clothed and housed, the outlook is hopeful. It is no less gratifying to be able to record a continued improvement in the attitude of the public and press. This good feeling, however, was unfortunately endangered in some places by the communal tension which prevailed. The good work of the police was frequently acknowledged in the press in connection with religious festivals, and in extinguishing fires and saving life and property. In several districts their efforts to save life during floods and times of distress have been gratefully acknowledged, and many acts of public service were reported during the year. Within the service itself, the importance of gaining the confidence of the public is realised, and the efforts of the superior ranks are constantly directed towards this end. Upon that confidence the success of the police is based.

Help to the police.

Side by side with this growth of a better feeling towards the police, are the signs of active co-operation by the public in the prevention of crime and other police work. In the past the greatest difficulty the police have had to contend with, is the apathy displayed by the average individual, who is wont to consider that the State has no call on his services or even on his goodwill, in the task of protecting society, and whose only anxiety is to dissociate himself from the acts of the official custodians of the peace. The past year has furnished further indications of an awakening of civic consciousness, and numerous instances of valuable assistance rendered by the public have come to notice. From one district, it is reported that villagers helped the police to prevent a serious riot and saved a sub-inspector who was being assaulted, and in another district the villagers on several occasions turned out to resist dacoits and

to picket or arrest criminals. At a police parade held in February 1927, 18 members of the public received rewards at the hand of His Excellency the Governor for valuable assistance given to the police.

Discipline and health of the force.

The discipline of the force continued to be well-maintained during the year. Departmental punishments showed a slight increase over the previous year, but judicial punishments dropped by 14 per cent. The number of criminal charges laid against the police fell from 223 in 1926 to 206 in 1927. Of the 206 cases, which exclude cases under the Police Act, 49 per cent. were found false or dismissed under section 203, Criminal Procedure Code; 22 cases ended in acquittal, and 6 were discharged for want of evidence. In only 30 cases was conviction obtained, 14 of which were for negligence in allowing prisoners to escape. There has been a gradual decrease since 1920 in the number of charges against the police, while the percentage of charges found true or ending in conviction has fallen from 29 per cent. to 14 per cent. in the year under review.

The health of the force is also reported to have improved. Admissions into hospital decreased from 4,190 to 3,860. The improvement is attributed in many districts to the regular issue of quinine and use of mosquito nets, the value of which is now being appreciated. The improvement in the clothing of the force has also helped. Malaria and dysentery were the prevailing diseases. At the Constables' Training School, 436 men out of 769 examined, were cured of hookworm disease.

Literate constabulary.

The education of constables continues to make steady progress, and 80 per cent. are now reported to be literate to the degree of signing their names and being able to read and write simple sentences. Classes are held daily at headquarters and at all police-stations, the curriculum including reading, writing and arithmetic, first-aid, traffic control and the reading and writing of English numbers and simple sentences in English. Greater discrimination is now being made at the time of recruitment, and only men who can read and write in the vernacular are, as a rule, taken on. The classes are popular and there are already indications that the self-respect and *morale* of the men are, as a result, improving.

General features.

As mentioned earlier in this review, it is a matter for grave regret that there was no sign of improvement in the communal situation. It is perhaps, however, a hopeful sign that the public are

recognizing the great strain which religious festivals constantly throw on the police of all ranks, and the admirable manner in which these anxious situations generally have been faced.

It is satisfactory to note that the total number of " true " cases cognizable by the police was the lowest in the history of the province, in spite of a, probably unreal, increase in the number of cattle thefts; and that the percentage of convictions was the highest since 1916, even in spite of the handicap in sessions cases from the delay that often occurs between the submission of the charge sheet and the opening of the sessions trial.

Political crime: the Deoghar case.

There were two prosecutions under section 153-A, Indian Penal Code, and one under section 124-A, Indian Penal Code, all ending in conviction. Out of 150 pamphlets, leaflets and cartoons examined, three were proscribed. The raid on a house in Deoghar, in October 1927, led to the finding of two Mauser pistols, many rounds of ammunition and a list of names in cypher. A case under section 124-A, Indian Penal Code, was instituted against 20 persons, of whom 19 were Bengalis and one a Punjabi, and has since ended in the conviction of twelve of them. It is a matter for congratulation that, although the detection of this dangerous political conspiracy, and the trial, took place in Bihar and Orissa, none of the accused belonged to the province.

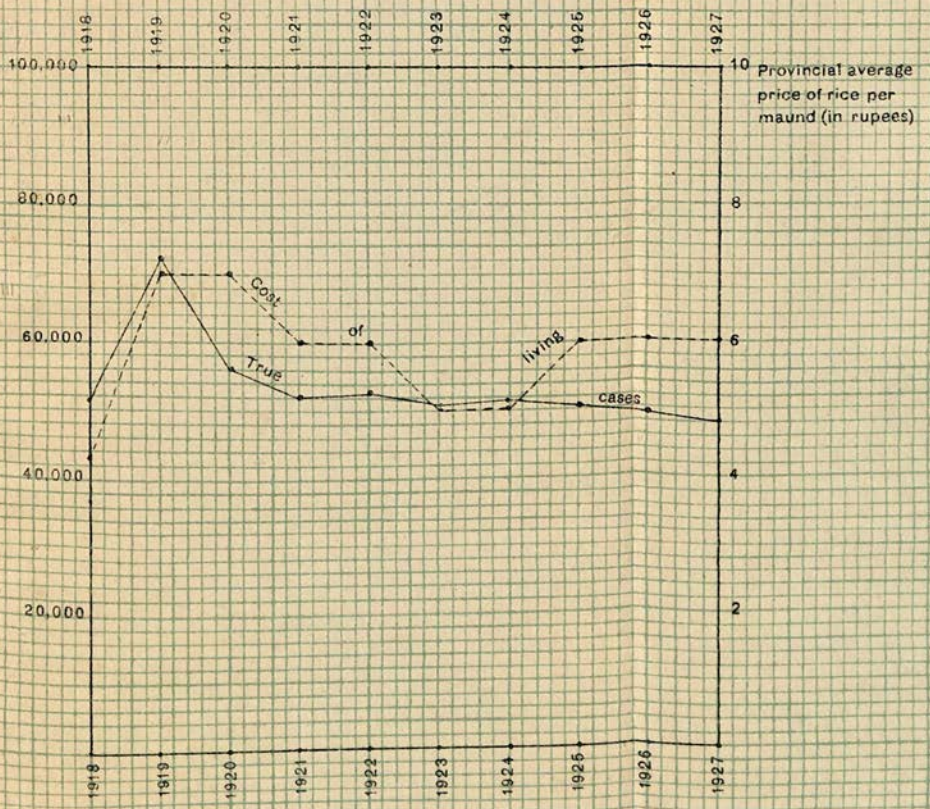
Murder.

The number of cases remained practically the same as last year, whilst there was an increase of 38 cases of culpable homicide. Of the 270 " true " cases of murder, only 127 were sent up for trial, of which only 54 ended in conviction. The comparative immunity from punishment for this serious form of crime is much to be regretted. It is a curious commentary on present conditions that the number of cases in which witchcraft was the motive showed an increase from 14 to 16. The communal unrest prevalent in Champaran was responsible for 6 murders, while in Cuttack and Darbhanga, young children were murdered for the sake of their ornaments. In Saran, a constable while on round duty at night was done to death by a gang of thieves whom he had recognized and challenged.

Robbery and dacoity.

Satisfactory progress was made during the year in dealing with the dacoity menace, though the number of " true " cases increased from 198 to 232 in 1927. Several gangs were prosecuted during the

Total true cognizable crime and the cost of living



year, in specific cases of dacoity, or under section 110 of the Criminal Procedure Code, and the effect of these should be apparent in the very near future. Purnea and Bhagalpur still continue to be the districts which suffer most from this form of organized crime, but it is to be hoped that the conviction of 37 members of the notorious Sultanpur gang will give some welcome relief to this area. In only 29 cases did dacoits meet with any resistance during their operations, but the success which attended the few efforts at organised opposition serves to emphasise the fact that apathy among the villagers is the dacoits' best weapon. The number of true cases of robbery fell from 151 to 132, of which 41 were highway robberies. Fifty cases were sent up for trial, of which 34 ended in conviction. A particularly daring case occurred on the Bengal and North-Western Railway. Three robbers entered a second class compartment occupied by a European and attempted to throw him out. He succeeded, however, in pulling the communication cord, whereupon the robbers threw out his hold-all and a suit case and made off.

Rioting.

A regrettable feature during the year was a further, though slight, increase in the number of cases of rioting and unlawful assembly. In the period 1916—20 the average number of cases was only 437 per annum, but in the period 1921—26, it had risen to 680. In 1927 there were 743 cases, 60 of which resulted in loss of life against 50 of the previous year. 74.7 per cent. of the 538 cases sent up for trial ended in conviction, as against 77.7 per cent. during the previous year. Though the preventive sections of the Criminal Procedure Code appear to have been used freely, the above figures suggest that the limit may not have been reached in this direction.

The frequent use of spears in agrarian riots continues to be a disquieting feature, whilst the instances in which the proceedings of the courts have been ignored, cannot be viewed with equanimity.

There were 26 cases of communal riots during the year.

Railway obstruction and derailments.

The increase in the number of attempts to derail trains is one of the disturbing features. During the year there were three derailments and eleven attempted derailments. In October 1927, the Up Ranchi Express on the Bengal-Nagpur Railway was actually derailed, but fortunately there were no casualties, whilst on the same date the Up Punjab Mail had a very narrow escape. Most of the cases were clearly the work of persons with some knowledge of railway work, who had access to

tools suitable for the removal of fish-plates, etc., presumably disaffected railway employees or dismissed labourers. As the increase in the number of attempts coincided with a general period of railway unrest, it is reasonable to assume a connection between the two, and to hope that an improvement of the relations between labour and the companies will witness a marked decrease in this revolting form of crime, which is very difficult to check. Only 3 cases were sent up for trial during the year.

False cases.

During 1927, 1,615 reported cases were declared maliciously false. It is satisfactory to note that the number of cases convicted rose from 96 in 1926 to 126 this year. Compensation under section 250, Criminal Procedure Code, was awarded to 82 persons wrongfully accused, compared with 53 persons in the previous year. There are few crimes more contemptible than that of deliberately laying false information against a person who has committed no offence. It is often extremely difficult to prosecute the offender successfully and the task of the police is not rendered more easy by the inadequate sentences frequently imposed. An order to pay compensation of Rs. 15 after a false charge of bribery against a head-constable and a constable is not likely to be deterrent.

Preventive measures.

Gratifying features of the year's work are the success of the picketting system, which achieved some notable arrests, and the satisfactory results which have followed from the system of teaching constables and chaukidars to recognize the active criminals of their own and of neighbouring police-stations. Considerable progress has also been made in teaching constables useful information about criminals, their relationship, haunts, *modus operandi*, etc. Apart from its self-evident advantages, the moral effect on the criminal of the knowledge that he is known to so many policemen, is very great and the system has undoubtedly restricted the movements of criminals and suspects. The system of classification of crime by *modus operandi*, was introduced in every police-station at the beginning of 1927 and is working satisfactorily. The system is an advance on the former method of classification by area, in which the unit was the union.

The administration of criminal justice: magisterial courts.

The magisterial staff of the province consisted of 303 stipendiary and 197 honorary magistrates. The number of cases tried by magistrates in 1927 was 70,117, including 3,424 pending from the previous year. The number

of cases brought to trial exceeded the figures of 1926, by 5,416. Of this total 69,475 cases were finally disposed of by magistrates and only 679 were committed or referred to sessions. The number of witnesses who attended for examination in these courts amounted to 266,412 of whom 195,415 were actually examined. Of these, less than 9 per cent. were kept till the third day and only 2 per cent. till the fourth. It will thus appear that magistrates avoided, as far as possible, harassment to witnesses by detaining them unduly long. The prompt payment of expenses to witnesses before they leave the magistrates' courts is also conducive to making the business of giving evidence, less unpopular.

Sessions Courts: Trial by jury.

The number of persons under trial before courts of sessions during the year was 3,178 against 2,772 in 1926. The figures of 1926 and 1927 are the highest during the last 12 years. The percentage of convictions remained about the same as in the previous year and was lowest in the districts of Bhagalpur (29·7) and Darbhanga (32·6). The average duration of sessions trials from the date of commitment to the date of decision was 70·3 days against 61·9 days in the previous year. The figures for 1927 were again the highest during the last 12 years. There were 167 cases during the year in which more than two months intervened between the dates of arrest and commitment. The system of trial by jury for certain specified offences was in force in ten districts of the province. The number of persons tried by jury was 580 and the verdict of the jury was accepted in respect of 475 persons. In Manbhum district 14 cases were tried with the aid of a jury, resulting in unanimous verdicts of "not guilty" in respect of all the accused in all cases. The judge disagreed with the verdict of the jury in 3 cases and in these cases his reference was accepted by the High Court and the accused were convicted. In Patna, where the Sessions Judge reports that jurors are inclined to be very lenient, the jury returned a verdict of "guilty" in 20 cases and a verdict of "not guilty" in 22 cases. The verdict of the jury was accepted in respect of 209 persons in 33 cases and in 9 cases involving 48 persons the judge disagreed with the verdict and made a reference to the High Court. In two of the cases all the accused were convicted by the High Court and in one case, one person was convicted and the remaining six persons were acquitted. Difficulty is still experienced in securing the attendance of jurors and assessors and in Gaya heavy fines had to be inflicted.

Criminal appeals.

There has been a progressive increase in the number of appeals preferred in the courts of sessions judges and district magistrates since the amendment of the Code of Criminal Procedure in 1923, as will appear from the following statement :—

—	Courts of Sessions Judges.	Courts of District Magistrates.
1	2	3
1923	1,659	2,023
1924	2,181	2,251
1925	2,347	2,539
1926	2,481	2,658
1927	2,654	3,024

The increase during the year under report as compared with 1923 has been 60 per cent. in the courts of sessions and 49·1 per cent. in the courts of the district magistrates. The number of applications for revision in the courts of sessions judges has increased by 59·9 per cent. as compared with the figures of 1923. These additions to the work of the sessions judges together with the remarkable increase in the number of both cases and persons committed to the sessions during the years 1926 and 1927 necessitated the transfer of a large number of sessions cases to assistant sessions judges, and yet district judges were able to dispose of an unduly small percentage of civil appeals in 1927. The number of sessions cases disposed of by assistant sessions judges during the year under report is the highest since the formation of the province and represents the equivalent of almost five full-time subordinate judges. The result has been that, in spite of the creation of some temporary appointments of subordinate judges, congestion has arisen in the civil files of the subordinate courts. The difficulties created by the amendment of the Criminal Procedure Code have been frequently stressed by the High Court. The work of sessions judges has been made more voluminous and more difficult and lawyers have been provided with increased facilities for delaying the disposal of criminal cases, resulting in a marked increase in the number of appeals.

Civil justice.

The volume of civil litigation continues to swell. No fewer than 180,611 original suits were instituted in the province, an increase of 559 over the previous year's figures. This figure is slightly higher than any previously recorded in the history of the province. The figures for the last 4 years are as follows :—

1923	...	...	...	158,943
1924	...	...	...	164,419
1925	...	...	...	175,699
1926	...	...	...	180,052

Of the new suits, 109,902 were rent suits, an average of roughly one to every 3,000 inhabitants of the province, but the amounts involved were usually small. Title suits on the other hand though relatively small in number represented in value 67·2 per cent. of the whole litigation of the province. The establishment of *panchayat* courts under the Village Administration Act has afforded no appreciable relief to munsifs. In Saran there has been some addition to the miscellaneous work of the District Judge in consequence of the revisional powers vested in him under section 78 of the Act.

Civil Justice Committee.

Certain of the recommendations of the Civil Justice Committee are still under consideration. The experiment of having a Registrar for all the civil courts at the headquarters of the District Judge was continued at Patna throughout the year. The experiment has also been extended to the headquarters station of Gaya. The District Judge of Gaya has reported that the appointment of the Registrar has provided better facilities for litigants in the transaction of business in the civil courts and is appreciated by the members of the Bar, but has met with organised obstruction by the staff. The appointment is said to have resulted in checking a number of malpractices that obtained in the offices and departments of the civil courts at Gaya.

Jail Administration: number of prisoners.

There are four central jails in Bihar and Orissa, at Bhagalpur, Gaya, Buxar and Hazaribagh, each with a whole-time Superintendent drawn from the Indian Medical Service. There are, in addition, 12 district jails, one juvenile jail at Monghyr, and 50 subsidiary jails. The daily average number of convicts rose from 5,488 in 1926 to 6,264 in the year under report. At the close of the year 6,397 male and 199 female convicts remained in custody.

Youthful offenders.

The total number of youthful offenders and juveniles, *i.e.*, all prisoners up to 20 years of age, admitted during the year, was 989 against 742 in 1926. Of these, 65 juveniles, viz., 63 boys and 2 girls were under 15 years of age as compared with 49 boys and 7 girls in the previous year. Excluding 39 boys under the age of 15 years who were sent to the Reformatory School at Hazaribagh, the remainder were either detained in the jails of the districts where they were convicted or were transferred to the juvenile jail at Monghyr, or to the Central Jail at Bhagalpur or to the district jail at Bankipore. In both these jails youthful offenders are segregated, and treated as in the juvenile jail. There were 168 boys in the Monghyr jail at the beginning of the year. The percentage of short-term prisoners is, however, excessively high and no permanent or substantial improvement in the character of a juvenile prisoner can be expected, unless he is detained for a period sufficiently long to enable the authorities to acquire some understanding of his character and to inculcate habits of discipline. This, however, is not possible unless legislation on the lines of the Borstal Act is passed, empowering magistrates to award at least 3 years' detention in a Borstal institution, in lieu of a short term of imprisonment. Detailed proposals have been drawn up for establishing a Borstal institution in this province, and the matter is now under the consideration of Government.

The number of youths admitted to jail, as well as the number of adult prisoners, is showing a disquieting increase year by year. It is evident that the punishments inflicted on juvenile delinquents have not sufficient deterrent effect. The larger the number dealt with in this ineffectual manner, the greater is the number of youths who will have lost their fear of jail and will help to swell the number of habitual criminals. The daily number of boys undergoing technical training in Monghyr jail was 110. The main trades in which training is given, are carpentry, black-smithy and tin-smithy. Night classes continued during the year and were of great help to these boys. The jailer of this institution was deputed to study the methods employed at Lahore and Bareilly in dealing with youthful criminals, and steps are being taken to consider how the Monghyr Jail can be improved and brought into line with modern practice. It is a matter for great regret that the Juvenile Prisoner's Aid Society, which was founded in 1923, had to be closed down during the year for want of public support. A certain amount of funds was raised but practical support in the form of

employment and supervision of the welfare of youths after their release, was conspicuously lacking. Arrangements, however, have been made with the Superintendent of the Government Dairy Farm to receive 20 boys a year for training in farming. Government also provide poor boys on their release, with tools to enable them to get a start in the trade they have learnt in the institution. The total indifference and apathy on the part of the public and frequently on the part of the boys' parents themselves, as to their fate after their release, nullified much of the good work done.

Health of the prisoners.

The health of the prisoners showed a very marked improvement during the year. The daily average number of prisoners of all classes was 7,503 or 957 more than the figure of the previous year, while the total number of admissions to hospital, the sick-rate and the death-rate were the lowest in the health records of the Bihar and Orissa Jail Department. A noteworthy feature is the reduction in the number of admissions for bowel diseases, viz., dysentery and diarrhœa, which were reduced by 54 per cent. as compared with the preceding year. This was brought about by the early recognition and treatment of irregularity of bowel action and by careful regulation of diet and hygienic treatment of the general body of prisoners according to season. The results bear testimony to the keen interest taken by the Superintendents and medical staff of the jails in the welfare of the prisoners.

Education and reformation of prisoners.

In view of the successful experiment in Gaya Central Jail, the question of extending the system of compulsory education to other central jails is under consideration. The results have been very encouraging and in view of the satisfactory progress during the experimental period, the scheme has been placed on a permanent basis and the minimum limit of sentence for admission to the class for adolescents has been reduced from two years to one year. There were 58 prisoners in the education class at the beginning of the year and 54 were admitted during the following months. All except seven were illiterate on admission. The subjects taught were those prescribed for the upper primary class by the Education Department and the progress made was most satisfactory. Seven of the boys finished their course of Class IV of the upper primary standard and six completed the full lower primary course and were promoted to the upper primary class. The teaching of manual labour and physical drill along with the school work was continued and the salutary effect

on the discipline and character of the boys was again evident. The "Star" class system of classification of prisoners, which has yielded encouraging results during the experimental period in the Hazaribagh Central Jail, has now been made permanent in that jail. The object of the system is to segregate habituals and incorrigibles from those in whom there is some hope of reformation. The " Star " class men are taught weaving and tailoring besides elementary education. Another innovation which acts among prisoners as a great incentive to good behaviour and also tends to reformation, is the examination of sentences by a revising board. This board meets once a year at different centres and after consideration submits recommendation for release on the cases of prisoners who have served half their sentences, if "casuals", and two-thirds, if "habituals", provided that the minimum period served is not less than 5 years. Eight prisoners were released during the year as a result of the board's recommendations. The question of revising the rules to make them applicable to all "casual" prisoners showing substantive sentences of 3 years and upwards, when half the sentence, excluding remission, has been served, is under consideration. It is also proposed that the board should meet twice a year instead of once as at present.

Jail manufactures.

The central jails at Buxar and Bhagalpur are the two important manufactories of the Jail Department. Tent-making, tailoring and cotton-weaving are the main industries at Buxar, while Bhagalpur carries on blanket-weaving, tailoring, black-smithy and carpentry. The total cash earnings of this branch of the department amounted to Rs. 81,839, a reduction of over Rs. 24,000 from the previous year. The Bhagalpur Central Jail is mainly responsible for the decrease; which is due to the Army Department purchasing fewer blankets than usual.

CHAPTER VIII.

Excise.

The subject of excise in this province has attained undue prominence because of its close and vital relation to the solvency of the provincial exchequer. The revenue from excise forms over 34 per cent. of the total income of the province and looms large in the eyes of the critics of Government because the remainder of the resources of Government are unduly meagre. Government, however, did not create the position, and not even its critics can put forward any practical alternative to the present policy, which may be conveniently, if somewhat loosely, summed up in the one phrase, " minimum consumption, maximum revenue ". Previous reports have devoted considerable space to the elucidation of Government's attitude towards this difficult problem, and it is unnecessary to reiterate the various arguments and facts on which it has been based. Total prohibition and local option are alternatives which have been, and are still being, urged upon Government. It has been shown that the practical difficulties in the way of the policy of prohibition are insuperable under present conditions. The province would not only have to incur the enormous cost of additional preventive staff, but would also have to face the odium of imposing extra taxation amounting to almost two crores of rupees The experiment of local option has been given a trial and is still being given a trial in certain other provinces of India. The results do not hold out much hope of this being a satisfactory solution, but Government are in correspondence with the local Governments concerned and are watching closely the situation.

Results of the Government policy.

It is of interest to examine the results of the declared policy of Government in the light of the statistics available in the Excise Department. The policy has undoubtedly been attended with success, and the efforts of Government to promote moderation in drinking have in fact proved more effective than the pseudo-temperance campaign of the boycott movement of non-co-operation days. The total excise revenue, from Rs. 103 lakhs in 1912-13, reached the large amount of Rs. 197 lakhs in the year under report. Unfortunately it is not possible to obtain exact figures to show the decrease in consumption because there neither is, nor can be, any

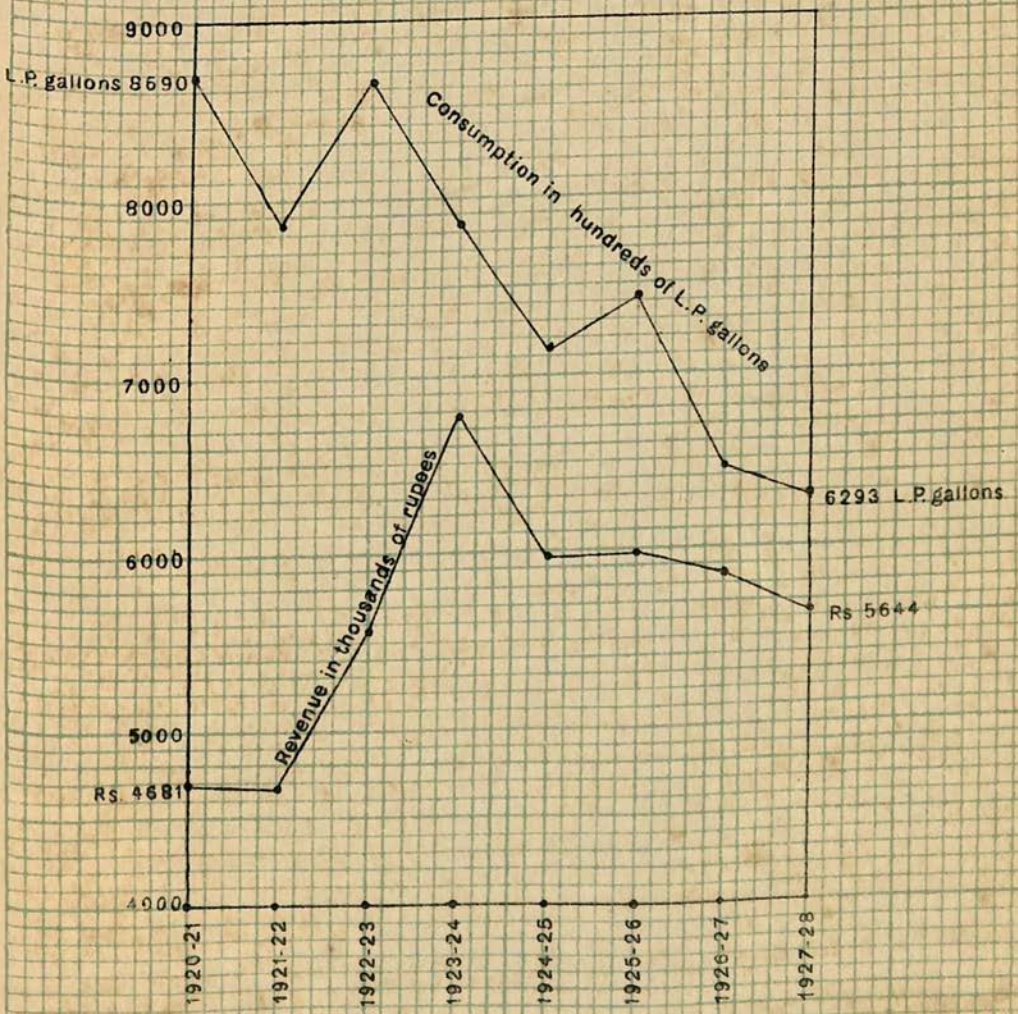
record of the consumption of country spirit from outstills (as there is from distilleries), and there are no figures for *tari* and *pachwai*. But the following figures taken in conjunction with the diagram on the opposite page show fairly conclusively that there has been a marked decrease in the amount of intoxicants and drugs consumed.

Figures showing the number of shops for the sale of excisable articles, the amount consumed and the revenue obtained.

Article.	1912-13.			1927-28.			Remarks.
	No. of shops.	Consumption.	Revenue in thousands of rupees.	No. of shops.	Consumption.	Revenue in thousands of rupees.	
1	2	3	4	5	6	7	8
		L. P. Gals.	Rs.		L. P. Gals.	Rs.	
Distillery liquor.	1,512	1,157,636	37,96	1,406	1,006,704	75,77	
Outstills ..	576	...	16,11	150	...	10,86	Statistics of consumption not available.
Tari ...	7,665	...	12,66	5,441	...	23,10	
Pachwai ...	356	...	1,31	336	...	3,76	
		Mds.			Mds.		
Ganja ...	1,334	2,498	22,53	1,100	1,553	45,08	
Bhang ...	297	538	52	284	305	1,17	
Opium ...	563	926	12,15	504	611	35,10	

Exact figures are available for *ganja*, *bhang* and opium. These show that consumption has been reduced by 38, 43 and 34 per cent. respectively, while the revenue has increased during the same period by 100, 125 and 188 per cent. It is, therefore, reasonable to claim that Government have reduced consumption by increasing the price of these articles. Within the same period of 14 years, the number of *tari* shops has been reduced by 29 per cent. For country spirit, no exact comparison is possible, because in 1912-13 in a number of districts this liquor was distilled in outstills by the licensees of shops and no records of the amounts consumed, were maintained in those districts. It may be noted, however, that the number of districts

Diagram Showing the Consumption of Country Spirit and Revenue obtained therefrom in the Districts of Patna, Gaya, Shahabad, Saran, Darbhanga. Bhagalpur, Monghyr, Purnea, Santal Parganas. Puri, Cuttack, Balasore & Manbhum.



in which the old outstill system survives, have been reduced from 9 to 6 and there are now only 150 such shops compared with 576 in 1912-13. Further, in spite of the replacement of so many outstills by shops drawing their supplies from central distilleries, the number of shops served by distilleries has fallen from 1,512 to 1,406 and the amount of spirit consumed in these shops has also decreased by 150,932 L. P. gallons, or by 13 per cent. But from the very nature of the system, it is certain that the amount of liquor produced and consumed at the outstills, now closed down, exceeded by a considerable amount the liquor produced at the distilleries. Government may, therefore, fairly claim that their policy has been attended with no small measure of success. There is a limit, however, to the price to which drugs and liquor can be raised, where it becomes profitable to make smuggling and illicit distillation worth while running the risk of prosecution; and the fall in both consumption and revenue for the year under review is an indication how sensitive excise revenue is to unfavourable harvests and to slumps in local industries. In addition to the policy of securing moderation in consumption by increasing the price of liquor and drugs, Government are adopting all practical methods which make for the better control of the traffic. The licensing boards established in the towns of Patna, Gaya, Chapra, Muzaffarpur, Darbhanga, Monghyr, Bhagalpur and Cuttack, as a result of the recommendations of the Excise Committee in 1923, were working successfully during the year. These boards took the place of the old Advisory Committees in the towns named and exercise, subject to the control of Government, all the powers of the Collector in respect of the location and number of shops for the retail sale of excisable articles of all kinds, except foreign liquor, and of the selection of licensees for shops to be settled on the sliding-scale system.

Sliding-scale system.

The sliding-scale system of settlements, described in earlier reviews, was further extended during the year to all drug shops in the districts of Hazaribagh, Ranchi, Palamau, Singhbhum and Sambalpur, and to 5 more country spirit shops in Jamshedpur and Bargarh (Sambalpur). The efficiency of the system was most striking in the case of *bhang*, the consumption of which during the year fell by 34 per cent., while the revenue was increased by 7 per cent. in the new area. The consumption of *ganja* also fell by 10 per cent. and that of opium by 9½ per cent. both accompanied however by a decrease in revenue of 12½ per cent. and 3·8 per cent. respectively. The decrease for this year compares satisfactorily with the fall of 16·4 per cent. and

21·7 per cent. respectively which was experienced in 1924-25 on the extension of the system for the first time to drug shops in the Bihar districts. The better results obtained in 1927-28 are attributed to the result of experience gained during the intervening years and to the fixation of suitable prices for retail sale. In 1924-25, through lack of experience, the price of *ganja* had not been fixed sufficiently high and this led to an increase in consumption as well as to a heavy slump in revenue. The experience so far gained of the working of this system indicates that given unremitting vigilance on the part of the excise staff, it can be worked successfully. Comparative figures of consumption of country spirit in certain Bihar districts for certain months of 1927-28 and for the previous year, furnish good evidence of the manner in which both consumption and revenue quickly respond in the sliding-scale system, to increases in retail prices within reasonable limits, and how the provincial results depend more on higher prices than an increased consumption.

Excise revenue in 1927-28.

The total revenue from excise during 1927-28 amounted to Rs. 1,97,14,737, a decrease of Rs. 38,014 from the previous year's receipts. A drop of nearly five lakhs in the revenue from country spirit was responsible for the net result, all the other heads showing an increase. The heavy fall in country spirit is attributed to the failure of food crops generally and to the depression in the coal and mica trades in certain districts. The increase in revenue occurred chiefly under *tari* and *ganja*, although actually the consumption of *ganja* was slightly below that of the previous year. The consumption of opium showed a decrease of 401 seers. The harmful practice of administering opium to children was reported to be common in two districts only, viz., Balasore and Sambalpur and to prevail to some extent in 9 others. The baneful effects of the practice were explained to the people through officers of the district board and education department, and excise officers in the course of their tours took the opportunity to warn purchasers, especially women. The local authorities are hopeful that this propaganda will in time eradicate the evil.

Legislation.

Two bills in connection with excise were passed into law during the year. The Bihar and Orissa Excise (Amendment) Act, 1927, prohibits the production of cocaine in this province and raises the age-limit for the possession of dangerous drugs and liquors. The other bill, the Bihar and Orissa Opium Smoking Bill, 1928, was introduced at the instance of the Government of India to carry out their obligations

incurred in ratifying the various instruments adopted by the Geneva Conference of the League of Nations, 1925. The bill prohibits the manufacture, possession or smoking of prepared opium, an exception being made in the case of registered opium smokers. Any person may have his name registered within two years from the date the Act comes into force, if he can prove to the satisfaction of the prescribed authority that he is not under 25 years of age and is in the habit of smoking opium. The bill comes into force on the 1st January 1929.

The Orissa Opium Enquiry Committee.

This committee was appointed by Government at the beginning of the year to enquire into and ascertain the connection between the heavy consumption of opium in the districts of Balasore, Cuttack and Puri and the local conditions, climatic physical and economic, prevailing in these districts.

CHAPTER IX.

Government and the Land.

The province of Bihar and Orissa came into being on the 1st April 1912 as a result of the reconstitution of the provinces of Bengal and Eastern Bengal and Assam. It was formed mainly of districts which had been, almost from the beginning of British rule, part of the presidency of Bengal. The only exceptions are the three Orissa coast districts, which did not become part of British India till 1803; the district of Angul which was taken over part in 1847 and part in 1856; and the district of Sambalpur. This district was ceded by the Marathas in 1803, but returned in 1805. It again came under British suzerainty in 1817 but was left under the local chief till 1849, when the doctrine of lapse was applied. Up to 1862 it formed part of the presidency of Bengal when it was transferred to the newly-formed Central Provinces. It was again transferred to Bengal in 1905 as part of the re-arrangements consequent on the first partition. In addition there are 24 Feudatory States bordering Orissa, administered by the Governor in Council as the agent of the Governor General. Geographically the province is divided into three divisions. The northern part, Bihar proper, consists of an alluvial plain drained by the Ganges and its tributaries. In the centre and southwest there rises the Chota Nagpur plateau consisting of an undulating formation with rich winding valleys, open uplands and wooded hills rising at points to over 3,000 feet in height. Orissa in the southeast is a strip of alluvial country between the hills and the Bay of Bengal, formed by the deltas of great rivers that drain the hilly country behind it and rise far back in the Central Provinces and Madras. The three natural divisions differ markedly in physical features as well as in distribution of religions and occupations. They also differ ethnologically and in language. The Oriyas who number 4 millions are a distinct people, with a language of their own and a script that bears no resemblance to Devanagari or Urdu. The Chota Nagpur plateau is largely inhabited by a number of aboriginal tribes whose language, customs and sympathies are quite alien to those of their neighbours. While throughout the province and particularly in the districts bordering Bengal, there is a distinct Bengali element.

Variety of Tenancy Acts.

This lack of homogeneity in the structure of the province is reflected nowhere more markedly than in the administration of its land revenue. The tenancy law is particularly complicated because it is not uniform. There are three main Tenancy Acts : the Bengal Tenancy Act in force in the three Bihar divisions, except the Santal Parganas district, a total of ten districts; the Chota Nagpur Tenancy Act in the five districts of the Chota Nagpur division; and the Orissa Tenancy Act in the three districts of Balasore, Cuttack and Puri. The districts of Sambalpur, the Santal Parganas and Angul have each a separate tenancy law of their own.

Administration of Land Revenue.

In the greater part of the province the land revenue is permanently settled. The only parts in which the revenue is temporarily settled are the district of Sambalpur; the greater part of the three coastal districts of Orissa, Balasore, Cuttack and Puri; the Government Estates, where the State is the proprietor; and a small number of petty estates, mainly those on the banks of the large rivers liable to change their courses. The whole district of Angul is a Government Estate and there are large Government Estates in the districts of the Santal Parganas, Singhbhum, Puri, Cuttack and Palamau, and smaller ones in nearly all other districts. During the year under review the total number of revenue-paying estates rose from 119,891 to 120,977 of which 107,679 were permanently settled, 12,965 temporarily settled and 333 managed directly by Government. The increase of 1,086 in the number of estates was confined to the two first classes of estates and was due mainly to partitions.

Relations between landlords and tenants.

The relations between landlords and tenants were much the same as in previous years. Commutation of rents still continued to strain relations in Gaya and Patna, and in one instance the filing of applications for commutation was followed by an attack upon the landlords which culminated in a murder. In Muzaffarpur the desirability of an early revision of the settlement record has been again emphasised by the prevalence of serious crime originating in disputes between co-sharer landlords and their tenants. The withholding of rent receipts was reported to be common both in Gaya and Muzaffarpur. Conditions in the Kosi Diara are still unsatisfactory in spite of the recent settlement. Some of the raiyats have been forced to abandon their holdings and others are in a precarious position owing to the acceptance of the Civil Court of a compromise between the proprietor and the

tenure-holders in which the latter accept the status of occupancy raiyats to the detriment of the existing cultivators. In Orissa relations, on the whole, have been satisfactory except in portions of one estate. Although the practice of levying illegal cesses and *begari* still exists to a certain extent, very few formal complaints came to notice during the year. In some places the rural co-operative societies have done something to check the malpractices, while in Manbhum, with the conclusion of the original settlement operations, they have practically disappeared. The working of the money-order system for the payment of land revenue and rent shows little progress. This system was expected to remove a frequent source of trouble, caused by landlords refusing to accept rent or to grant a receipt for rent accepted. The system, however, appears to be used chiefly by those who have a dispute with their landlords and in consequence the percentage of money orders refused is high. In the majority of disputed cases, the *raiyats* prefer to deposit their rents in court.

Government Estates.

The number of estates held direct by Government was only 33 out of a total of 120,977 revenue-paying estates, but they accounted for Rs. 22·38 lakhs out of a land revenue demand of Rs. 157 lakhs. The condition of the raiyats in these estates was on the whole, satisfactory during 1927-28, although the season was not generally favourable. Portions of the estates in Balasore suffered from floods and agricultural loans were distributed, as well as advances for the reconstruction of houses. In Shahabad remissions of revenue were granted to *khasmahal* tenants on account of the deterioration of soil in the Ganges *diaras* and the abandonment of cultivation in Bishunpur estate on account of litigation. In the Kolhan estate in the Singhbhum district, seven villages were destroyed by a sudden spate of the river Baitarani. One man was drowned and 29 bullocks were lost, in addition to poultry, sheep and goats. Immediate assistance on a liberal scale was given by the local authorities. In other parts of the Kolhan food stocks were ample and health was good, while employment was plentiful in the mines of the locality. Throughout the estates a sum of Rs. 1,45,360 was spent during the year on various improvements such as tanks, wells, drainage, roads, bridges, etc.

Trust, Wards and Encumbered Estates.

There is another important class of estate of which Government, though not the landlord, has assumed temporarily the responsibility of management. This class comprises,

first, trust and attached estates, administered by the Collector of the district; secondly, wards' estates administered under the Court of Wards Act of 1879, and managed either by Government officials lent for this purpose, or by salaried managers; and, thirdly, encumbered estates taken over under the Chota Nagpur Encumbered Estates Act, 1876. Not infrequently, large estates in the province pass under Government control for a number of years, and the system of administration, thus introduced, usually leaves permanent effects on the estate, to the mutual benefit of Government, the landlord and the tenants. The largest estate under management in 1927-28, was the Bettiah estate, with a current demand of nearly Rs. 25 lakhs. Other important estates are Ramgarh, Banaili (4 annas) and Narhan. During the year 10 estates were released, leaving 77 estates under management at the end of March 1928. During recent years there has been a steady fall in the number of these managed properties. In 1921 there were no fewer than 135 estates under management. The decrease has occurred chiefly among estates managed under the Chota Nagpur Encumbered Estates Act.

Their management during 1927-28.

The administration of these estates presented no exceptional features and the year may be described as normal. The total current demand of all estates was Rs. 53·17 lakhs, but there was also a heavy arrear demand of Rs. 19·48 lakhs. The total collections amounted to 100·1 per cent. against 102·4 in the preceding year, 42 out of 77 estates attaining the standard percentage. During the year debts to the sum of Rs. 7·09 lakhs were paid off. The outstanding liabilities of estates remaining under management at the close of the year rose to Rs. 75½ lakhs compared with Rs. 70½ lakhs at the beginning of the year. This increase, however, is on paper only and is due to the inclusion in the accounts of debts which had not previously been officially ascertained. After providing for the liquidation of debts, the payment of rent and cess to superior landlords, and the ordinary expenses of management, the proceeds of these estates while they are under management, are devoted to the maintenance of the proprietor and his family, the education of wards and other minor relations, estate improvements and charitable donations, particularly in the cause of medical relief and education. The Bettiah Estate has set a consistently high standard in this respect and its example is being followed by the Ramgarh estate which has set aside a sum of Rs. 75,000 for the construction of a women's ward in the Hazaribagh Sadr Hospital.

Survey and Settlement.

As mentioned above the land revenue in the greater part of the province is permanently settled, and consequently the work of survey and settlement is not usually undertaken for, or concerned with, the assessment of land revenue as in other parts of India. Here settlement operations as a rule mean the preparation of maps and records-of-right to secure to all with interests in land, evidence of their rights, and for the settlement of fair rents where this is applied for. On the conclusion of the operations at present in progress in Orissa a detailed survey on the scale of 16 inches to the mile will have been completed and a record-of-rights for the whole province with the exception of unstable *diara* areas along the banks of the larger Bihar rivers. The volume of work done by the settlement department since the province started may be judged from the following figures :—

	1912—20.	1921—27.
Area surveyed	20,658 sq. miles.	9,005 sq. miles.
Area of which records were finally published	27,551 sq. miles.	7,747 sq. miles.
Number of tenancies for which rents were settled.	981,734	884,764
Amount of rent settled	Rs. 73,21,841	Rs. 25,55,199

During the year ending 30th September 1928, survey and settlement operations were continued in the districts of Puri, Cuttack, Balasore and the Santal Parganas and in the Kosi Diara tract of the Purnea and Bhagalpur districts; revision operations were commenced in the district of Ranchi. An area of 2,468 square miles was cadastrally surveyed and the records of 1,681 square miles were attested. During the same period the records of 1,677 square miles were finally published and the rents of 588,167 tenants were settled. The revision settlement of the Porahat estate in the Singhbhum district was sanctioned and the traverse survey begins in 1928-29. Field work in the Ranchi district was handicapped by a severe outbreak of malaria amongst the staff, contracted in the unhealthy area under survey. Numerous economies were made with a view to keeping down the cost of settlement, mainly by simplification of procedure. The feasibility of the employment of air survey for cadastral work was further

examined. The Air Survey Company has agreed to make a test survey at its own cost in a small area in the Santal Parganas. The object of the test is to ascertain whether aerial photographs can be brought to a sufficiently accurate scale to coincide with the maps of the previous settlement. If the test is successful, there will be no necessity for a traverse, and the cost of revision survey by air may compare favourably with revision survey by the ordinary method.

Forests.

The primary functions of forest administration are to preserve those forests which are essential on climatic or physical grounds, to conserve and develop commercially forests which are a valuable source of timber, and to supply the immediate requirements of the local agricultural population while safeguarding the forests for their descendants. The forests under the State are accordingly divided into two main classes. First, the reserved forests comprising those whose preservation is economically or physically essential: these are administered with a view to bringing in the maximum revenue compatible with sound provision for the future; secondly, the protected forests which are administered primarily to supply the demands of the local population.

In Bihar and Orissa the scope of the Forest department is more limited than in other provinces of India. While twenty-three per cent. of the total area of India is State forest, only four and a half per cent. of the area of Bihar and Orissa is forest controlled by Government. The reason for this is that the permanent settlement of 1793 gave to the landed proprietors the ownership of the great majority of forests, and the State has no control over these. The forests controlled by the Forest department, therefore, are only those which lie in the scattered Government estates in Chota Nagpur, Orissa, and the Santal Parganas. The area is small as the following table shows, and the possibility of extension is remote.

Year.	Reserved forest.	Protected forest under the Forest Department.	Other Government forests.	Total.
	Sq. miles.	Sq. miles.	Sq. miles.	Sq. miles.
1912	1,719	1,057	927	3,703
1920	1,747	1,210	854	3,811
1927	1,796	1,225	686	3,707

With the exception of the North-West Frontier Provinces and Baluchistan, Bihar and Orissa has the smallest area under forest of any province of India, and is ill-equipped to meet the demands of its agriculturists who form the bulk of the population. There are, however, some 12.000 square miles of reserved and protected forests in the Orissa Feudatory States which are under the supervision of the Agency forest officer, a member of the Imperial Forest Service drawn from Bihar and Orissa. The surplus produce from these forests finds its way into the adjoining districts and helps to relieve the situation.

The denudation of forests.

An important problem which still awaits solution is that of the wastage of private forests. The problem is most serious in Chota Nagpur where the plateau is being rapidly laid bare. The forests in Chota Nagpur belong mostly to private persons. They have been recklessly wasted for more than half a century, partly owing to the indebtedness and improvidence of those landlords. who sell their forests to contractors for immediate profit; and partly owing to the wasteful exercise of forest rights by the villagers. The consequent denudation of the catchment areas of important rivers is believed to have accentuated in turn the periodic floods to which the coastal tracts of Orissa are subject. Although Government have no control over private forests they could not view this progressive destruction without anxiety and as far back as 1909 the Bengal Government proposed to legislate to provide for the preservation of private forests and to secure the afforestation of waste lands not owned by Government. The Government of Bihar and Orissa, however, had to drop the bill in 1914 owing to the opposition to Government interference with private rights. Endeavours to persuade landlords to enter into agreements with Government for the protection and management of their forests have also produced little result. In 1924 the question of introducing special legislation to secure the necessary control was again investigated. But the repeated attacks on forest policy in the Councils of 1924 and 1925, and the proceedings of a special conference with the landlords, held at Ranchi, forced Government to realize that it would be impossible to carry such legislation in the present uninformed state of public opinion. They decided therefore that the only method of safeguarding essential areas was to acquire the forests compulsorily. They accordingly proposed to undertake a ten-year programme of acquisition, costing about ten lakhs of rupees. For this object a provision of Rs. 1,07,000 was included in the budget of 1927-28.

This was decisively rejected by the Legislative Council by 55 votes to 33. At present therefore the activities of the Forest department in respect of private forests are restricted to examination at the request of the proprietors, and the formulation of working plans or working schemes for their improvement and administration. A few requests for such assistance were received during the year and there were indications that a few of the bigger landlords were beginning to appreciate the necessity of forest conservancy, particularly in the Ranchi district.

The general attitude to forest policy.

The general attitude of the cultivator, which is reflected in the Legislative Council, towards forest policy and the Forest department is undoubtedly hostile. This is partly due to genuine ignorance, a failure to appreciate the benefits of well-conserved forests, and partly to an unwillingness to look to the future. The *raiyat* sees in forest conservancy merely interference with his liberty and the landlord generally sees only that it will deprive him of a convenient way of raising ready cash by cutting down his forests. The *raiyat* does not understand the necessity for the department rules; he either does not know or takes no heed of the fact that indiscriminate grazing prevents natural regeneration, that fires not only destroy young saplings but even big forest trees, that wood must be cut in those areas which are ripe for exploitation and not where a young forest is growing up. In spite of their difficulties the Forest department keep down restrictions to a minimum. During the year only 26 per cent. of the reserved forests and 9 per cent. of protected forests were totally closed to grazing, to protect the young forest growth, while 57 per cent. of the reserved forests and 59 per cent. of the protected forests were open to all cattle except sheep and goats throughout the year. The value of grazing allowed free or foregone at privileged rates amounted to Rs. 1,09,605. In addition to this, *raiyats* are given facilities for the removal of cattle fodder even from areas strictly reserved, although full advantage is not taken of the privilege and tons of valuable fodder are wasted annually. The total number of forest offence cases was only 2,214 during the year under review.

The policy of forest conservancy, however, to be successful, must be supported by public opinion. Government therefore, as a beginning, have sanctioned a scheme to give publicity to the aims and objects of the Forest department. Lectures accompanied by lantern slides will be given by forest officers at suitable centres in the province.

Development work.

Much of the wealth of the forests lies unutilized on account of the lack of adequate facilities for its extraction. A regular programme of improvements in communication and housing, laid down by Government several years ago, is being pushed on steadily. During the year under review, over 25 miles of cart roads were laid down at a cost of Rs. 29,187 while a sum of nearly Rs. 40,000 was spent on the repair of existing roads. Over half a lakh was spent on new buildings. All this expenditure will in time repay itself as improved extraction facilities increase the value of the forests by bringing the timber and produce nearer the market, while better residential buildings keep the staff healthy and fit for work, besides enabling them to look after distant areas properly.

Forest utilization.

The activities of the Forest department with regard to finding proper markets for hitherto unsaleable timber are meeting with considerable success. The Angul forests contain bamboo plantations for which there has hitherto been no available market, but an agreement has been entered into with the Titaghar Paper Mills Company for the extraction of the bamboos for making paper pulp. Proposals to work certain areas for the exploitation of pit props have been approved by Government and the department hopes to obtain a ready market for these in the coalfields of the province. An important feature of the year was the completion of an air-seasoning shed at the Ranchi Technical School and valuable data regarding the seasoning and utilization of the more important timber species other than *sal* are expected. Negotiations are also in hand with the East Indian Railway and the Bengal Nagpur Railway for the erection of artificial seasoning plants at Lillooah and Kharagpur, in the hope of encouraging the use of some of the less known timbers. The scheme of planting selected areas with lac hosts, commenced in 1925, was continued and a further area of 1,685 acres was planted at a cost of Rs. 10,332. A demonstration brood lac farm has also been started in conjunction with the Co-operative department, with the object of bringing the actual cultivator into touch with improved methods of cultivation. At the close of the year the total area of the casuarina plantation near Puri amounted to 2,328 acres, including 295 acres planted during the year. The project was undertaken to meet the increasing demand for firewood at Puri and its financial aspects are promising. Substantial profits were realised during the year from the supply of sleepers to the Bengal Nagpur Railway.

Financial results.

The net revenue for the year 1927-28 amounted to Rs. 1,46,284 against Rs. 35,686 in the previous year. This represents 15 per cent. of the gross revenue but does not include the value of forest produce granted free or at reduced rates. In future accounts are to be maintained of all revenue foregone by free grants.

The canal systems of the province.

There are four main irrigation works in the province, viz., the Orissa, Son, Tribeni and Dhaka canals, all of which are classed as unproductive works. The Son system, however, has recently begun to fulfil the conditions of a productive work and in 1927-28 brought in a return of 7·39 per cent. on the capital outlay, exclusive of interest charges. The remaining three systems scarcely pay their working expenses, bringing in a small return only occasionally. All expenditure in connection with these canals is borne by the local Government and the entire revenue derived is credited to the provincial accounts. The local Government, however, have to pay to the Government of India the annual interest charges on the capital cost of all the canals. In the case of the Orissa canals, this amounts to Rs. 8½ lakhs a year and during the last 5 completed years, the average annual loss to the province on these canals has been nearly Rs. 7½ lakhs.

The Irrigation Department.

The Irrigation Department of Government deals not only with irrigation itself but also with the kindred subjects of drainage and embankments for flood protection. In the purely irrigation sphere, the principal concerns of the department are the Orissa and Son canals, which irrigated 250,384 and 593,731 acres respectively during 1927-28. The remaining two systems the Tribeni and Dhaka canals which irrigate a part of the Champaran district from streams flowing into the province from Nepal, are of much less importance. Between them they irrigated only some 90,000 acres during the year. The Orissa main canals and to a less degree the Son main canal also serve the purpose of communications, but the construction of railways has much reduced the traffic by water. Altogether the receipts from navigation tolls amounted to Rs. 1,24,076 against Rs. 1,37,566 in the previous year. Drainage and embankments are of great importance in the coastal districts of Orissa, and of some considerable importance in most parts of north Bihar which suffer periodically from the vagaries of the rivers flowing south from the Himalayas, as well as from floods in the Ganges. The total length of such embankments

maintained by Government during 1927-28 was 825 miles and the money spent on them was Rs. 2,92,125. Most of this was devoted to ordinary repair work and making good the damage caused by floods, particularly in Orissa where heavy damage was caused by the disastrous floods of 1927. Mention of these floods is made in an earlier chapter, while a summary of the conclusions arrived at by a committee of experts deputed by the local Government to investigate the problem of their recurrence will be found in appendix I of this volume.

CHAPTER X.

Agriculture.

Agriculture in Bihar and Orissa.

Agriculture is by far the most important occupation in Bihar and Orissa, over 90 per cent. of the population being dependent, directly or indirectly on agriculture for its prosperity. In the whole province there are only four towns with 50,000 or more inhabitants. Its mineral resources though unusually rich are concentrated in a comparatively small area, to which also the only large scale industries are confined; and the great bulk of the population is, and is likely to continue to be dependent on the land as its only means of livelihood. When further it is stated that out of every thousand persons, 963 live in villages, 814 are directly dependent on agriculture and 652 are ordinary cultivators, the dominant factor in the economic life of the province becomes self-evident.

General economic conditions.

Harvests in Bihar and Orissa have been inferior for several years and the year under review was again disappointing in this respect. On the other hand there has been no serious failure of any important crop for some time and this in itself is no small mercy. Apart from the effects of floods in Orissa there was practically no economic distress during the year and the condition of the agricultural population was on the whole satisfactory. In Chota Nagpur, which is extremely sensitive to fluctuations in the rainfall, there was a considerable increase in emigration to the tea-gardens. It is interesting to note that the prejudice against the Assam tea-gardens appears to be decreasing, owing to improved terms and the introduction of short term engagements. This is a matter for satisfaction, since it not only contributes to a solution of the labour problem in Assam, but also provides an additional source of employment for the cultivators in bad seasons. Expenditure on agricultural and land improvement loans was heavy. About eleven and a half lakhs of rupees were distributed as against approximately seven lakhs in the previous year. Nearly three quarters of this sum was allotted to the districts of Balasore and Cuttack. The stocks of food grains in the province at the end of the year were reported to be generally

sufficient. Prices as a whole ruled higher than the previous year in the greater part of Bihar and Chota Nagpur, but they were lower in Orissa.

Diversity of agricultural conditions.

The physical features of the province fall naturally into four divisions in each of which the population is more or less homogeneous: the alluvial plains of Bihar, north and south of the river Ganges respectively; the hilly tracts of the Santal Parganas, Chota Nagpur and the Feudatory States; and the Orissa delta. It is usual to describe the soil of Bihar as very fertile but that is by no means generally true. North of the Ganges there are tracts of good light soil which with sufficient rain and adequate manure will produce valuable crops, while its rice fields under favourable conditions bear good crops though not so heavy as those of Bengal. In south Bihar, except for the narrow strip of fertile land near the Ganges, much of the soil is poor; the principal crop is rice and except when the rainfall is unusually well distributed this crop is only brought to maturity by the aid of irrigation from the canals and from the many minor irrigation works, most of which are privately owned, which are characteristic of this tract. Of the double-cropped area a considerable portion is sown with various quick growing pulses during the *rabi* season. Though these represent a comparatively small cash return, since the yields are low, they are of considerable economic importance both by supplementing the supply of human food and as fodder for cattle and by assisting in the maintenance of the fertility of the land. The great density of the population, 642 per square mile in north Bihar and 502 per square mile south of the river Ganges, presses heavily on the agricultural resources of the area. The soil of the hilly tracts in the centre of the province varies greatly in fertility. The bottoms of the valleys usually receive plenty of moisture and bear fine crops of rice which extend in good years well up the slopes. The crop of the higher rice land is, however, precarious, while the uplands on which maize is the principal crop, are also dependent on seasonable rain. Much of the upland soil is said to be incapable of bearing a crop more than once in two or even three years. A good deal of this tract is still covered with forest, though reckless cutting has considerably diminished the area in the last fifty years and left land covered with scrub jungle which is useless for agriculture. These factors account for the relatively low density of population which is only 186 per square mile throughout the whole tract, and only 138 in the Feudatory States.

Although the soil of Orissa is moderately fertile, agriculture suffers greatly from periodic floods which occur on the average once in three years. The tract, which is the delta of a number of large rivers, receives a great volume of water whenever heavy rain falls on the Chota Nagpur plateaux, while the drift of sand from the Bay of Bengal blocks the exits of the rivers. In spite of these drawbacks, the density of the population, 486 to the square mile, is but little less than that of south Bihar. This wide diversity of soil and of general agricultural conditions imposes limitations on the work of the Agricultural Department which do not exist to the same extent in other provinces. The discovery and application of agricultural improvements whether new seeds, implements, manures or method of cultivation, involves careful local experiment and testing on local small farms. A further characteristic of the province, as of the rest of India, is the predominance of small peasant holdings. The land is divided and subdivided into small holdings, usually consisting of a few acres only, the produce of which is barely sufficient to support a single family. The prevalence of these small holdings, the poverty and ignorance of the agricultural classes and last but not least, the lack of sufficient funds, all combine to make the work of the department slow and laborious.

Character of the season.

For the agriculturist the year that ended with March 1928 was not a very favourable one. In the early part of 1927, the rainfall in Bihar and Chota Nagpur was above normal, which enabled the land to be well prepared for the *bhadai* sowings and for the broadcast rice crop which is of great importance in Chota Nagpur and Orissa. Heavy rain in the eastern part of the province during the first week of June enabled the *bhadai* crops to be sown early and the light rain in the latter half of the same month exactly suited them. As a result, the maize harvest in the north-east of the province, where it is of special importance, was the heaviest for many years. The rice crop was not so fortunate. The rainfall at the beginning of the monsoon was insufficient for the transplantation of paddy, which was seriously delayed in consequence. Over a large part of Bihar transplantation was not finished by the middle of September, when the monsoon practically came to an end. Orissa on the other hand had a good season throughout, apart from the disastrous floods described in the first chapter. These floods, however, were restricted to certain areas, where the paddy crops were completely destroyed. Elsewhere the crops which did not remain too long

under water were actually benefited. The *hathia* rains once more failed throughout almost the whole of Bihar proper, and marred the prospects of the *rabi* crops. General rain in the north-east of the province did something to relieve the situation with regard to these crops but did not make up for the previous drought.

Bhadai crops.

The *bhadai* or autumn crops were fair, except in parts of Cuttack and Balasore where some damage was done by floods in the early part of the season. The failure of the *hathia* rains affected the crops in parts of Patna, Darbhanga, Bhagalpur and Purnea. A heavy maize crop was harvested on the eastern side of the province as the result of favourable conditions in June and July. The outturn of all *bhadai* crops was eventually estimated at 92 per cent. on an area 10 per cent. below normal.

Jute.

The jute crop is of minor importance in the province and is grown chiefly in Purnea, Cuttack and Balasore. Rainfall was not generally favourable; in parts of Purnea drought retarded the growth, while in Cuttack and Balasore floods did some damage. The gross yield of the crop was estimated at 667,000 bales, against 763,500 bales, the revised figure of the previous year.

Sugarcane.

Sugarcane is cultivated to some extent in every district and probably ranks next in importance to rice by reason of its superior value. Weather conditions during the year were generally favourable to the crop, the autumn being estimated at 97 per cent. of the normal.

Winter rice.

The late arrival of the monsoon combined with the failure of the *hathia* rains affected adversely the transplanted crop, which was also damaged by floods in parts of Orissa and in north Bhagalpur. As a result this important crop did not do well during the year, except in Orissa, and the final estimate was calculated at 76 per cent. of the past ten years' average, on an area about 14 per cent. less than normal. The gross estimated yield, 65,738,400 cwts., was about 30 per cent. short of the estimated normal outturn on normal area.

Rabi crops.

Bihar is the chief *rabi* growing tract, but these crops are also of some importance in Cuttack, Palamau and Hazaribagh. The shortage of *hathia* rain this year caused a decrease in the area sown. Rainfall and cloudy weather at the end of January was also

harmful to the crops in south Bihar, while hail did some damage in Shahabad. In some parts of Bihar considerable damage was caused by rust to the wheat crop and the Pusa varieties showed up well by their relative resistance. The estimate of the wheat crop was 80 per cent. of the normal, of spring oilseeds 87 per cent. and of other *rabi* crops including summer rice, grain and barley, 85 per cent. The outturn of the castor crop was estimated at 83 per cent.

The improvement of agriculture.

Apart from the general duty of accumulating knowledge of local agricultural conditions, of affording help in the matter of insect pests and plant diseases and of collecting and publishing agricultural forecasts and statistics, the main functions of the Agricultural Department are, firstly, by research and experiment to devise technical improvements in agricultural practice—including the introduction of superior varieties of crops and new crops, better methods of manuring, better implements and improved methods of cultivation; secondly, to test the applicability of these improvements to local conditions in the various tracts and ascertain their economic value; and thirdly, the dissemination of information about tested improvements by demonstration on small farms and on cultivators' fields and by propaganda in the villages.

Since 1922 the policy of Government has followed mainly the recommendations of the Agricultural Committee of 1921. The Sabour Agricultural College was closed on the recommendation of the Committee, the research sections reduced, and the limited funds available devoted to an increase in the number of small farms for the purpose of local experiment and demonstration. Government decided that seven ranges, with seven central farms, would ultimately be necessary in view of the diverse agricultural conditions of the province but deferred the opening of additional large farms. The Bankipore farm which had been closed prior to the Committee's report was replaced by the Gaya farm. Small farms have been increased from 4 to 18; projects for 6 more farms are ready and await allotment of funds. The present programme is first to provide each district with one farm so far as possible.

The achievements of the department.

It will now be convenient to examine the work accomplished by the department and to consider what still remains to be done in the near future. As a result of sound experimental work in the past, the Agricultural Department is now in

a position to develop propaganda on a broader basis than hitherto, for the introduction of verified improvements into the agricultural practice of the province. In the case of rice, sugarcane, wheat, grain, groundnuts, jute, *rahar*, maize, tobacco, and many other crops, the improved strains introduced by the department are already being grown over large and rapidly increasing areas. This is particularly the case with *dahia* paddy, which has proved suitable as an early winter rice throughout a large portion of the province, and with several seedling canes raised at the Imperial Sugarcane Research station at Coimbatore and tested for suitability on the local farms. It is no longer possible to state with any approach to accuracy the total areas under improved crops but in the case of rice and sugarcane careful estimates show that these areas considerably exceed 23,000 acres and 25,000 acres respectively. The total quantity of seed of improved crops supplied during the year from the department's farms was 1,265 maunds, in addition to over 19,000 maunds of sugarcane sets. But these figures give no indication of the area under such crops, since the area grown from seed actually supplied by the department is now only a fraction of the whole.

The supply of seed.

The demand for seed has however been rapidly outstripping the organization for its supply, and the problem of seed production and distribution has become one of outstanding importance. Since the close of the year steps have been taken to remedy the defects in the existing organization. It is impossible to meet all demands for pure seed from the small quantity which can be produced on departmental farms, and the only practical solution is therefore to organize the production of pure seed by private growers under the supervision of the department. It is proposed therefore to build up circles of registered seed growers whose produce will be purchased at a premium by the department for general distribution; and it is hoped that ultimately it will be possible to organize co-operative seed unions which will gradually be able to take over the main work of seed distribution. This aspect of the problem has been receiving the careful attention of the Director of Agriculture and the Registrar, Co-operative Societies, and detailed recommendations have recently been issued to co-operative societies as to the lines on which they can most usefully contribute to the improvement of agricultural practice in their area.

Artificial fertilizers.

The partially-completed soil survey of the province and the chemical examination of the soils of the departmental farms indicate clearly that

in this province, particularly in south Bihar, the soils in certain tracts are definitely deficient in various respects. A striking instance is presented by the Nawadah farm in the Gaya district where, without phosphatic manures, no crop will grow. The problems are essentially local but many of the results obtained apply to large areas. This work of the department has been of the utmost value to agriculturists. The demand for artificial fertilizers, both nitrogenous and phosphatic, is continually expanding and the valuable effects of particular manures in suitable conditions have been definitely established. Throughout south Bihar the application of such manures as ammophos and leunaphos at the rate of one maund per acre, costing about Rs. 9, is definitely profitable for rice and superior to ammonium sulphate applied by itself. The extra yield amounts to about 6 maunds of paddy per acre, worth some Rs. 30. In Chota Nagpur, applications of ammonium sulphate on poor rice land at two maunds per acre have given, over a series of years, an increase of yield ranging from 22 per cent. to 39 per cent. and in one instance on very poor land, of 62 per cent.

Some progress has also been made with the problem of improving the cultivators' implements, particularly in north Bihar, where the improved types of ploughs and cultivators designed by an officer of the department are beginning to be widely appreciated. Special steps are now being taken to carry on propaganda in the villages for the introduction of these implements and of the improved methods of cane cultivation which they render possible. Valuable work has also been done for the improvement of cultivation by embanking and irrigation, and there is a special staff at Kanke near Ranchi and at Bhagalpur to advise agriculturists in regard to such schemes and to give assistance in carrying them out. The Kanke system of contour *bandhs* has been particularly successful and promises to add materially to the prosperity of Chota Nagpur, where the underground water-supply is poor and other sources of irrigation few.

Agricultural engineering.

Another branch of the department's work which merits particular mention is the Engineering branch. The demand for tube wells for irrigation purposes is steadily increasing and additional plant and staff have become urgently necessary. A small addition to the number of borers was sanctioned during the year and since its close the Council has agreed to a small supplementary grant for boring plant. These additions, however, do not go far to cope

with the greatly increased demand, and further additions will be made as soon as funds are available. Applications for small 2½ inch borings (the class of boring suitable for the irrigation of small plots and therefore in request by the ordinary cultivator) have risen from 95 in 1923-24 and 290 in 1926-27, to 366 last year, and the successes achieved by the department in carrying out such borings may be expected to lead to a still more rapid increase in future. Twenty-seven applications were also received for 5 inch, and 10 for large size tube wells, and 12 such wells were actually completed. This branch of the work of the department not only adds materially to the agricultural resources of the province but has also supplied valuable information in regard to the availability of water-supplies. At the same time, it is practically self-supporting. The demand for the assistance of the department for the erection of water lifting plant is also steadily increasing. For the smaller tube wells and bored wells, the *rahat* pump is gaining in popularity. This pump is nothing more than the familiar Persian wheel, constructed in metal and with due attention to mechanical details to increase its efficiency.

The cattle problem.

The importance of improving the cattle of the province has also not been lost sight of, but in this matter there are very serious difficulties to overcome. The cattle problem has recently been examined in all its aspects by the Royal Commission on Agriculture and has received, and is still receiving, the careful consideration of the local Government. The difficulty of finding a solution of the problem is increased in Bihar and Orissa by the almost complete absence of land which could be utilised for increasing the area available for pasture. Work upon improved fodder crops, therefore, and propaganda for the introduction of silage methods and the stall-feeding of cattle, are of particular importance in this province. These questions are receiving close attention at every departmental farm, and methods of preparing silage adapted to local conditions have been worked out and brought to the notice of cultivators by the distribution of vernacular pamphlets. Much useful work has also been done with a view to the improvement of fodder supplies. Herds of indigenous cattle, suitable to the purpose for which they are locally required and to provincial conditions, are being built up by selective breeding at Kanke and Monghyr, and at the buffalo breeding farm at Sepaya. There is also the nucleus of a herd of Orissa cattle at Cuttack, which will be increased as soon as funds permit. The work possible at

these centres is, however, very limited in scope and great expansion would be necessary before it would be possible to provide a supply of bulls of draught breeds sufficient to bring about any improvement in the ordinary cultivator's cattle. In March 1927 enquiries were made by Government with a view to ascertain the demand for buffalo bulls in the districts and the extent to which the district boards would be prepared to pay the cost of their acquisition and maintenance. From the replies received during the year it appears that an active demand is limited to the districts of Bihar, particularly to the north of the river Ganges. One board in north Bihar—that of Muzaffarpur—has signified its readiness to purchase a few bulls and to maintain a number more if they are supplied free, and six other boards are prepared to arrange for the maintenance of bulls similarly supplied. It has, therefore, been decided to concentrate the proposed breeding operations within a selected area, viz. that of Muzaffarpur—Darbhanga, in the first instance, and a supplementary demand of Rs. 4,000 was sanctioned by the Legislative Council in August 1928 for the purchase of buffalo bulls for distribution on these lines. It is hoped that before long the Sepaya farm will be in a position to supply the annual demand for such bulls for purposes of distribution to district boards and other local bodies.

The Veterinary College and the Patna Cattle Breeding and Dairy Farm.

The building of the new Veterinary College at Patna has made good progress but unavoidable delays in the recruitment of the requisite staff have made it impossible for the college to open its first session in July 1929, as originally intended. Meanwhile the services of the Bengal Veterinary College at Belgachia in Calcutta continue to be utilised for the training of veterinary students from this province and 12 such students joined that college during the year. A sum of Rs. 86,773 was paid to the Bengal Government towards the maintenance of the Bengal Veterinary College. The upkeep of the new college, without adding greatly, therefore, to the financial burdens of the province, will give it all the advantages of having an institution of its own. The Patna cattle breeding and dairy farm, which was started in 1926, made considerable progress during the year. This farm besides being a large cattle breeding station will form a valuable adjunct to the veterinary college by providing the students with practical training in animal husbandry and connected subjects. Steps have been taken to remodel the irrigation channels, which will, it is hoped, now provide the farm lands with an adequate water-supply. At the end of the year the

farm herd consisted of 6 bulls and 156 cows, besides bullocks and pony stock, and over 73,000 lbs. of milk were sold to the Patna General Hospital and to the public during the twelve months.

Cattle disease.

The prevalence of disease was more widespread than for some years past. Contagious diseases were reported from nearly every district and only two were free from rinderpest. Anthrax was active in the Central and Orissa ranges, and foot and mouth-disease continued to spread, this disease accounting for more than 64 per cent. of the outbreaks and 87 per cent. of the cases. The total number of outbreaks was 8,394, against 5,151 in 1926-27 and 6,408 in 1925-26, the number of animals affected being over 200,000, or nearly double the number affected in either of the preceding years. The number of deaths rose from 9,179 to 14,251, but it is satisfactory to record that in spite of the very heavy increase in the number of cases, the mortality in the year under review was considerably lower than in the previous years, the number of deaths in 1925-26 being over 16,000 and in 1924-25 over 20,000.

Preventive inoculation.

This gratifying decrease in mortality was no doubt largely due to the increase in preventive inoculation. In the early years of the province's existence, before the prejudice against inoculation had been overcome, only about 20,000 cattle were so treated each year. This year the number of inoculations performed amounted to nearly a quarter of a million as against 147,731 in 1926-27. The increase was especially marked in north Bihar where in previous years the prejudice against inoculation was very strong. The growth in expenditure upon serum and vaccine in the province is, however, causing considerable difficulty to the local bodies which hitherto have been responsible for meeting the cost and many of them have appealed to Government to take over the burden.

Treatment of disease.

The number of cases treated in the veterinary hospitals or by the touring assistant surgeons continues to increase. In the last three years the number of fresh cases, including castrations, treated by touring officers has risen from 70,893 to 167,518 and that of patients treated in hospitals from 36,117 to 51,505. The total number of fresh cases, including castrations, which averaged 73,568 during the five years ending 1916-17, had risen to 101,840 during the last five years and in 1926-27 stood at 157,135. The further increase to 220,698 during 1927-28 is conclusive evidence of the good work done by the veterinary department and its appreciation by the

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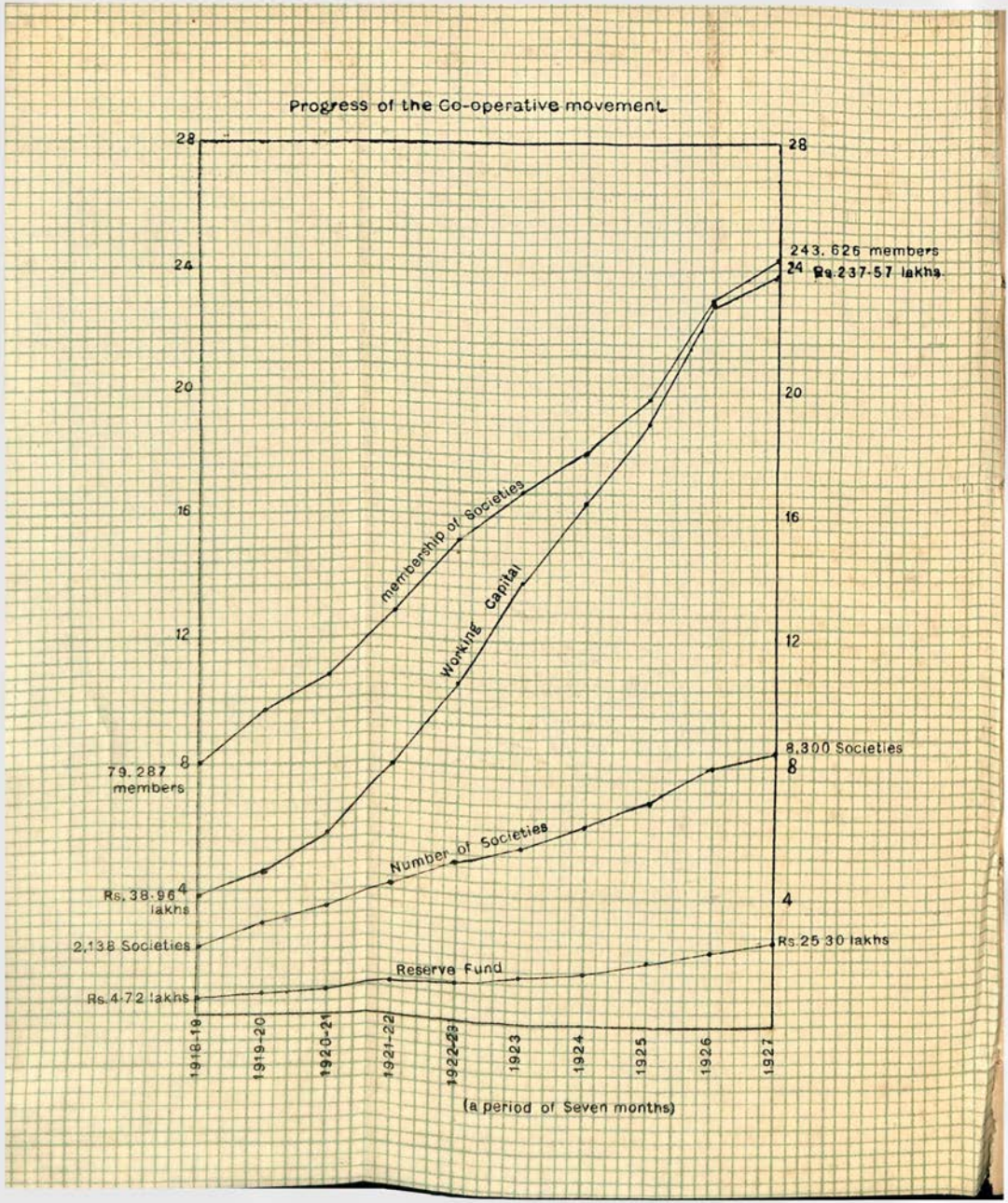
Progress of the Co-operative movement
28
24
20
16
12
8
4
243. 625 members
Rs. 237-57 lakhs
8,300 Societies
79. 287 members
Rs. 38-96 lakhs
2,138 Societies
Rs. 25 30 lakhs
Rs. 4-72 lakhs
membership of Societies
Working Capital
Number of Societies
Reserve Fund
1918-19
1919-20
1920-21
1921-22
1922-23
1923
1924
1925
1926
1927
(a period of Seven months)

public. But a year of heavy incidence of disease such as the last emphasises the inadequacy of the present organization. Although 2,500 more outbreaks of disease were attended by officers of the department than in the preceding year, 1,700 had still to be left unattended. During the year under report the Royal Commission on Agriculture has completed its work and has recommended a large increase of staff in the provincial veterinary departments. The Commission's recommendations are receiving the close attention of Government, but the financial outlook of the province does not unfortunately hold out any hope of funds being available for this purpose in the near future. Moreover, many district boards, as stated in an earlier chapter, are in straitened circumstances and find difficulty in maintaining even their existing organization.

The Co-operative movement.

In a province so predominantly rural as Bihar and Orissa, the organization of agricultural interests is of vital importance. It is now accepted that by the application of co-operative principles most of the obstacles to progress in rural communities may be overcome. Wherever agriculture is the predominant occupation, co-operation is coming to be regarded as the natural basis for economic, social and educational development. The co-operative organization with its credit societies provides the cultivator with loans at a reasonable rate of interest and thus helps to lighten his crushing burden of indebtedness, which is the most powerful obstacle in the path of rural development in India. These rural credit societies, which are the chief corner-stone of the co-operative movement, have also an excellent educative value: wisely guided they encourage and stimulate the practice of thrift among their members and readily lend themselves to organization for mutual help throughout the countryside.

Progress in Bihar and Orissa.

The diagram facing this page gives an idea of the progress of the movement during the past ten years in Bihar and Orissa. At the end of 1927 there were 66 central banks, including the Bihar and Orissa Provincial Co-operative Bank, Limited, which is the apex bank of the movement; 220 guarantee unions and 8,300 primary societies, of which no fewer than 7,934 were agricultural societies. This shows the extent to which this is a rural movement. The number of members of primary societies was nearly a quarter of a million. The working capital of the societies, which is nearly all given out in loans to the members, was well over two crores of rupees and the reserve stood at fully 25 lakhs.

Provincial Bank.

The working capital of the apex bank increased during the year from Rs. 51 lakhs to Rs. 57 lakhs, but profits remained almost stationary at about three quarters of a lakh. This is attributed to a reduction of one per cent. in the rate of interest on loans to central banks. In spite of reduction, in the rate of interest deposits increased even more than in 1926, and investments in central banks in the form of loans and cash credits continued to dwindle. It is regrettable that no improvement has been effected in the reduction of overdues from central banks, which still reach the very considerable figure of over Rs. 1½ lakhs.

Central Banks.

Only one new central bank was registered during the year, bringing the total of such institutions to 65. The financial position of the banks improved, the year's profits amounting to nearly Rs. 4⅓ lakhs against Rs. 3½ lakhs in each of the preceding years. It is regrettable that these banks still continue to accumulate deposits far in excess of the amount needed. This policy has not only adversely affected the provincial bank by forcing it to invest its surplus funds outside the province, but amounts to sheer waste of members' money in the payment of unnecessary or unnecessarily high interest to private depositors.

The part played by the central banks in the introduction of agricultural improvements and the amelioration of rural conditions deserves mention. The work already done in this direction drew the attention of the Royal Commission on Agriculture and it is satisfactory that the number of societies which actually undertook such work continued to increase during the year. More than 40 central societies are now engaged in one branch or another of agricultural improvement, either by popularizing improved varieties of crops and implements or through the distribution of chemical manures. Three banks maintained whole-time agricultural inspectors, and elsewhere demonstrations were carried out under the supervision of officers of the Agricultural Department. Useful work was also done by some central societies in the grant of land improvement loans for the construction of *bandhs*, the sinking of wells, reclamation of waste land and similar purposes. Also in the sphere of education and in that of sanitation and medical relief there are signs of an increasing interest by these societies. The importance of veterinary relief has not been lost sight of, and the aid of the co-operative societies has also been enlisted in this connexion. In all these directions there is almost unlimited scope for the closest possible collaboration between the Co-operative and

other departments of Government and only by such collaboration will it be possible to enable the villagers throughout the province to take advantage of the improvements which scientific research is able to place at their disposal.

Primary Societies.

It is perhaps unnecessary to emphasise the importance of the village societies in the advancement of the co-operative movement. Reference has been made in the last two reviews to the steady deterioration which has taken place during the last few years in the general standard of efficiency among these societies in this province. It is therefore satisfactory to note the marked improvement which has occurred in this respect during the year 1927. Judged solely by the number of new societies registered and the amount of new capital invested in the movement, progress was slower than in the previous year, only 323 societies having been registered as against 1,043 in 1926, and the working capital having increased by only Rs. 26⅓ lakhs against Rs. 65½ lakhs in that year. Expansion was, however, purposely restricted in pursuance of the policy of devoting greater attention to consolidation and the improvement of existing societies and this policy of caution has been fully justified. Not only has further deterioration been averted but an appreciable improvement in all branches of management has taken place. The percentage of collection by central banks from affiliated societies has risen from 59 to over 68 per cent. and would have been considerably higher but for the low standard reached by a comparatively small number of banks, particularly in the Cuttack circle. The classification of primary societies also shows some slight improvement, the number of societies classed as " bad " and " hopeless " being materially lower than in the preceding year. The fact that 69 per cent. of the societies are still only classified as " average " and the percentage of " good " and " model " societies is only 19½ per cent. shows, however, how much has still to be effected before it will be possible to regard the future of the co-operative movement in the province with real confidence.

CHAPTER XI.

Commerce and Industry.

The predominance of agriculture in the economic life of the province tends perhaps to obscure by comparison, its vast industrial potentialities. Although in the census of 1921 out of 34 million inhabitants in Bihar and Orissa, exclusive of the Feudatory States, only some 2½ millions were shown as supported by industry, the province contains two of the most important industrial areas in India, namely Jamshedpur and the Jharia coalfield. The rich mineral deposits in Chota Nagpur form a source of great potential wealth, especially owing to the fact that iron ore is found within easy reach of the coal areas. The coalfields of the province have now been worked for over half a century but the commercial possibilities of the iron and other mineral deposits have only begun to be exploited in the present century and in the Jamshedpur area there has grown up within the last 20 years what may prove to be the biggest metallurgical industry in the East.

Coal.

Next to the handloom industry, which is mentioned later, coal-mining is probably the largest single industry, and it is certainly the most important organized industry in the province. The total output of coal in Bihar and Orissa during 1927 was almost 14½ million tons, out of 21,108,976 tons raised in the whole of India. The depression in the trade continued during 1927 and led to the further closing down of many small mines producing inferior grades of coal. The elimination of mines of this class has been going on steadily for the last few years, but has not caused any decrease in the total output, which in Bihar and Orissa increased in 1927 by 550,658 tons. The Jharia coalfield with a total output of 10,583,487 tons retained its premier position, but it was again noticeable that the Raniganj coalfield, which this province shares with Bengal, increased its output at a greater rate than Jharia. The Karanpura and Bokaro fields, where practically all the collieries working are State-owned, showed remarkable increases of 111 and 18 per cent. respectively. The improvement in the exports of coal which was so marked a feature during 1926, the year of the coal strike in England, was continued. The work of the Indian Coal Grading Board in supervising and certifying cargoes is proving invaluable to the export trade.

Iron and Steel.

The total production of iron ore in the whole of India during the year 1927 was 1,068,281 tons, of which Bihar and Orissa produced 1,007,037 tons. The iron mines are situated in Singhbhum and in the neighbouring Feudatory State of Mayurbhanj. The vast iron-ore deposits of this neighbourhood represent one of the most important resources of the province and industrial development in this area will doubtless increase in the years to come. The ore is in such quantities and so accessible that the mining, consisting as it does in removing hill sides in a systematic manner, presents no special feature of interest. A new mine was started during the year by the Tata Iron and Steel Company at Noamundi in the Singhbhum district, while two new areas at the Gua mines in the same district were opened up by the Indian Iron and Steel Company with which the Bengal Iron Company is now amalgamated. The Tata Iron and Steel Company of Jamshedpur is the largest steel-making firm in India and in 1927-28 produced 644,296 tons of pig-iron, 599,565 tons of steel and 206,041 tons of rail and beams, representing an increase in production in every department. The Tinplate Company of India, situated near Jamshedpur, is the most promising of the subsidiary companies in this area.

Mica and copper.

The Bihar mica belt, in the three districts of Hazaribagh, Gaya and Monghyr, is the most important source of mica in the world. The demand for mica for munition purposes during the war gave a great impetus to the industry and during the years 1914 to 1918, this field produced about 82 per cent. of the total Indian output and about 55 per cent. of the world's total production. Of recent years some of the large deposits have been developed on systematic and scientific lines, but the trade is very largely in the hands of petty mining firms and contractors, and the loss of mica by theft is believed to be considerable. In 1927 the province is reported to have produced 31,564 cwts. out of 42,081 mined in British India, but these figures are not positively reliable by reason of the manner in which the trade is carried on. The export trade during the year declined slightly, shipments falling from 83,300 cwts. to 82,500 owts. The principal producers complain bitterly not only of their losses by theft, but also of the depression of prices brought about by the entrance into the market of large quantities of "unofficial" mica. The difficulty of introducing some system of control of the trade was emphasised by the fate of the Mica Bill

which the local Government brought forward in the Legislative Council during the year, mention of which was made in Chapter III.

The output of copper ore in India in 1927 was 5,010 tons, valued at Rs. 2,00,400 as compared with 9,508 tons in 1926. The whole of the production, with the exception of ten tons, came from a single mine at Mosaboni in Singhbhum, where ore reserves exceeding half a million tons are said to have been proved. A new dressing, smelting and refining plant of modern design is being erected on the bank of the Subarnarekha river near the Bengal Nagpur railway and about 8 miles from the mine. A large increase in production in the near future may, therefore, be looked for.

Chromite and manganese ore are also found in Singhbhum and of these minerals 9,970 tons and 2,552 tons respectively were produced during the year. Practically the whole of this was taken by the Tata Iron and Steel Company for the manufacture of special classes of steel.

Lac.

India possesses a virtual monopoly of the lac trade and some of the most important centres in which lac is grown, or shellac is manufactured, are in this province. The trade, however, is subject to violent fluctuations as no actual estimate of production is possible owing to the difficulty of obtaining reliable statistics of the stick-lac crop. Lac is generally cultivated by small cultivators as an occupation subsidiary to their main occupation of agriculture, the chief centres of cultivation being Manbhum, Singhbhum, Palamau, Ranchi and the Santal Parganas. The best lac is grown on the *kusum* tree, but the kind of tree which is in most common use for lac cultivation is the *palas* tree which in Chota Nagpur is frequently found growing in considerable numbers near human habitations where the crop of lac can be easily watched. Although shellac is threatened by the competition of synthetic products, there has not yet been evidence of any great relaxation of demand. Exports actually fell by about 8 per cent. in quantity but higher prices accounted for an increase in value by 28 per cent. in comparison with the previous year.

Sugar and indigo.

Indigo formerly was manufactured to a large extent in north Bihar, but owing to the competition of the synthetic dye, its manufacture is becoming less and less each year. The estimated outturn during 1927-28 was only 2,093 factory maunds (156,300 lbs.) against

2,399 factory maunds (179,100 lbs.) in the preceding year. The collapse of indigo has led many concerns in north Bihar to exchange its cultivation for sugarcane and a number of factories have sprung up in that part of the province for the manufacture of refined sugar with modern machinery. During 1927-28, 14 such factories were working. When it is remembered that India imports nearly a quarter of a million tons of sugar a year, the field for expansion in this trade offers tremendous possibilities.

Other local industries.

There are many other local industries of considerable importance some of which may be briefly mentioned. Bihar is the chief source of salpetre in India, but owing to the development of the nitrate deposits in South America and of German potash, the demand has fallen off and the trade is losing its importance. The northern part of the province is also one of the chief tobacco-growing areas in India, but little of the tobacco is exported. Some of it is made into cheap cigarettes at the factory of the Peninsular Tobacco Company at Monghyr, a large concern employing nearly 3,000 hands. Nearly one-third of the limestone produced in India comes from the Shahabad district and there is also a large and prosperous cement factory at Japla in the Palamau district. The clay resources of the province are also considerable and a number of concerns are now at work in the coalfields producing fire-bricks and pottery.

The department of industries.

The necessity for a special officer to study and develop the industries of the province was felt early in its history, but it was not until 1920 that the Department of Industries was created. The new department took over from the Director of Public Instruction the control of technical and industrial education and in 1921 the subject of fisheries was transferred to it. In 1920 a Board of Industries was constituted consisting of 15 members, the majority of whom represent industrial interests, for the purpose of advising the Director upon technical education and upon the work of the department generally. Since 1923, when a State Aid to Industries Act was brought into force for the province, this Board, which was reconstituted in 1924, has also possessed statutory powers of an advisory nature under that Act, and in 1927 it was reconstituted with 20 members. The activities of the department in the direction of industrial development comprise both experimental and propaganda work for the improvement of industrial methods in the province, and may be roughly divided into four

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branches, viz., (1) textile, (2) engineering, (3) fisheries, and (4) State aid. The total expenditure on these branches of the department's work, excluding the cost of direction, amounted in 1927-28 to about Rs. 2 lakhs.

The handloom industry.

Next to agriculture, though a long way behind, handloom weaving is the most important occupation of the people of this province. In many cases, however, weaving is commonly combined with some other occupation, usually agriculture. In the census of 1921, 164,592 handlooms were found to be working in the province, weaving each year on the average twenty million pounds of yarn, mostly of coarse counts, into cloth worth nearly 5 crores of rupees. By far the greater number of looms weave cotton, but silk and wool are also woven. Centres in which weaving is of special importance are Bihar in Patna district, which produces the greatest variety of cotton goods in the province, Bhagalpur town and its neighbourhood which are famous for *bafta* cloth (a mixture of *tasar* and cotton), the Madhubani subdivision of Darbhanga district which produces the well-known *kokti* cloth, the yarn for which is spun by hand from a local variety of brown tree cotton, Cuttack, where there are strong communities of domiciled Bengali and Telegu weavers, and Sambalpur where the *Bhulias* weave *saris* with solid cross-borders which cannot be woven on a power loom. That the hand-weaving industry is holding its own is evident from the fact that whereas in 1912-13 one-seventh of the cotton cloth worn in the province was of local manufacture, the proportion had risen to over one-sixth at the end of the decade.

Work of the textile branch.

Most of the looms in use in the province are pitlooms of antique design and the processes of weaving are of the most primitive kind. The efforts of the department have, therefore, been directed towards the introduction of improved appliances, particularly the fly-shuttle loom which is estimated to increase the output from the same amount of effort by at least 50 per cent. Propaganda is carried out by means of stationary or peripatetic demonstration parties and by the practical training of weavers at Government institutes. Weaving demonstration parties were started as far back as 1915, but when the department came into existence there were still only four such parties in four of the districts of the province. The number of the parties has now risen to ten and their activities cover all the districts except two. Since 1921 they have been instrumental in introducing

nearly 16,000 fly-shuttle looms, besides other improved appliances. In 1922 a silk institute was started at Bhagalpur and a blanket factory at Gaya, in order to evolve improved methods and appliances for these industries. In 1925 a cottage industries institute was opened at Patna containing sections for weaving, dyeing, toy-making, etc., and a sales depôt was opened in the town in connection with it. In these institutions the suitability of improved appliances for cottage workers is tested, so far as possible, under commercial conditions, and stipends are granted for the training of artisans in working these appliances according to the methods recommended by the department. The products of the cottage industries institute and the silk institute at Bhagalpur have been markedly successful, commanding a ready sale not only in India but also in England where a special agent is employed on a commission basis to push their sale in the London market, where the demand is increasing. The blanket factory at Gaya, now termed the wool Weaving Institute, which has till recently achieved little progress among the conservative wool weavers of that neighbourhood, was more successful this year in certain places in the district where a number of improved looms were introduced, which promise better results. Experimental work in sericulture is also being carried out at the Bhagalpur Silk Institute and ten rearers are employed at different centres in the province to encourage the introduction of *eri* culture in suitable localities as a subsidiary occupation for the cultivators. A scheme for starting a seed-supply station at Neterhat on an experimental basis is under consideration. Some experimental work has also been set afoot in the Ranchi district with a view to ascertain the possibility of introducing mulberry silk culture in the province. So far the results have been inconclusive, and since the close of the year the whole subject has been investigated by a sericultural expert from Bengal.

The engineering branch.

The function of this branch of the department is to advise the small capitalist regarding the purchase of plant and machinery, to supervise their installation, and to arrange for regular periodical inspection of it, if so desired. Small fees are charged for these services which, though they do not cover the cost of the organization, continue to increase. In 1927-28 they amounted to Rs. 8,859 against Rs. 8,085 for the previous year. Early in 1926 a Government demonstration match factory was started at Patna at a capital cost of one lakh, to prove the possibility of working match-making machinery in this province and to train young men in this industry. Owing mainly to irregular and inadequate supply of suitable wood, the factory

had to be closed down for a considerable part of its first year of working and has remained closed since October 1927. The percentage of raw material suitable for the manufacture of splints, which could be obtained from the kinds of wood available, had been greatly over-estimated, while the selling price of the finished article had fallen much below that on which the estimates had been framed. In view therefore of the probability of increased losses, Government did not feel justified in financing the experiment further. It was at one time hoped that private enterprise might be forthcoming to continue the factory as a commercial concern but this hope has not materialised and it has been found necessary to dispose of the plant and machinery piecemeal.

Fisheries.

A small fishery branch is maintained, the staff of which consists of a superintendent, with an assistant and a temporary inspector. The activities of the branch have hitherto been mainly confined to the breeding of carp and distribution of fry for the stocking of private tanks, and the general supervision of fishermen's co-operative societies. The services of the Director of Fisheries, Madras, have been obtained to investigate and report on the feasibility of establishing a biological station on the Chilka lake, with the object of ascertaining what measures, if any, are necessary for the further development of the lake and also whether its natural replenishment is sufficient to keep pace with its growing exploitation.

State Aid to industries.

The State Aid to Industries Act is another means by which Government seek to foster industrial development in the province. The Act was passed in 1923, since when aid in the form of loans and cash credit has been granted to the amount of nearly six and a half lakh. The largest amount was Rs. 5 lakhs made in 1925 in the form of debentures to the Indian Steel Wire Products, Limited, at Jamshedpur. This company stopped work in August 1927 and the trustees took over the property under the trust deed and finally sold it to a private party in Jamshedpur. The purchase price has been paid in full since the close of the year. Another concern which had received financial assistance; namely, the Vishwakarma Mills, Limited, also closed down during the year under review. Sixteen applications for State aid were considered by the Board of Industries during 1927-28 and in 11 cases the Board recommended the grant of aid. The total amount sanctioned in one form or another during the year was a little over Rs. 1⅓ lakhs. The Act also allows Government to purchase plant and sell it on the hire

purchase system, and some use has been made of that method of helping industries.

Technical and industrial education.

Facilities for technical and industrial education, the provision of which is one of the main concerns of the Industries department, continued to be well-maintained during the year. Expenditure under this head amounted to over Rs. 5½ lakhs, or more than two-thirds of the total expenditure of the department. The growth in this direction has been very marked. When the department came into being in 1920, there were in existence only three technical and industrial institutions under Government control, namely, the Bihar School of Engineering and the Ranchi and the Phulbani Industrial Schools, the expenditure by Government on this form of education amounting only to a little over a lakh a year. In 1924 the Bihar School of Engineering was raised to the status of a college and affiliated to the University and classes for training mechanical apprentices were added to it. An engineering school had been opened at Cuttack in the preceding year and has recently been reorganized by the addition of a third year class and the introduction of mechanical apprentice classes. The Ranchi Industrial School has been greatly enlarged, and with the starting of mechanical apprentice classes there also, has been raised to the status of a technical institute. A similar institute for Tirhut was opened at Muzaffarpur in 1925. The evening mining classes in the coalfields area have been in existence since 1905, their cost being shared, since the separation of the provinces, with Bengal. These were reorganized on a provincial basis in 1921 and stipends awarded for the encouragement of natives of Bihar and Orissa. Technical classes for giving training in composing, letter-press printing and book-binding have been opened in the Government Press at Patna, and an apprentice class has been started at Dehri to train the sons of blacksmiths and those boys who have left school at about the middle English age, as fitters and mechanics.

Bihar College of Engineering.

Despite difficulties caused by changes in the staff, the Bihar College of Engineering had a satisfactory year. The number of applicants for admission to the Civil Engineering classes increased from 93 to 104, of whom 30 obtained admission. The examination results continued to be satisfactory. There was a considerable falling off in applications for admission to the subordinate classes and also the mechanical apprentice classes, and the average standard of qualifications possessed by candidates for

the apprentice classes leaves much to be desired. On the other hand, the standard has markedly improved in the case of candidates for the artisan course, and it may be found advisable to abolish the apprentice classes altogether, if improved facilities for the theoretical training of the artisan students can be provided. The apprentice course has never been successful in attracting youths of the right stamp, whereas the demand for artisan students on completion of their training has been encouraging.

Other institutions.

The Orissa School of Engineering has now been fitted with an electric installation and the new hostel buildings are nearing completion and will provide additional accommodation which was urgently required. New workshops are also in process of construction. The progress made by students in the new mechanical apprentice classes is reported to be satisfactory, but the results obtained by students of this school in the subordinate examinations were poor. It is also regrettable that the artisan classes, which were started in 1925 and were reported last year to be flourishing, have proved unable to retain the boys once they have attained a certain degree of efficiency. This difficulty is apparently not being experienced to a similar extent at the Tirhut Technical Institute and Ranchi Technical School, where the artisan classes have proved very popular. The mechanical apprentice classes at these institutions have still to demonstrate the usefulness of the training given in them. The number of students attending the evening mining classes in the coalfields showed a slight improvement and there was also some improvement in the standard of qualifications. The additional concessions and facilities mentioned in last year's review would appear, therefore, to have had some success in attracting a better class of candidate.

Aided institutions.

Assistance in the form of grants-in-aid is also given to a number of private institutions, notably the Jamshedpur Technical Institute and the Jamalpur Technical School, for both of which in the beginning one-third of the capital cost was found by the local Government, Rs. 2½ lakhs in all. At both of these institutions seats are reserved for students of this province. The Jamshedpur Technical Institute records another successful year of working. The number of enquiries received from persons seeking admission rose from 203 to 266, and 130 applications were received from qualified candidates, against only 28 in the preceding year. The rapid improvement in the average standard of applicants is decidedly encouraging and

shows that this institution is fulfilling a very important function in the province. The working of the Jamalpur Technical School was also satisfactory. The scheme for 3rd class bound apprentices which was started last year, when it attracted 275 students, continued to flourish, the number on the roll rising to 310. In both these institutions there was a marked improvement in the number of students belonging to this province, the percentage being 42 at Jamshedpur and 47 at Jamalpur, against 39 per cent. and 40 per cent. respectively in 1926-27.

State scholarships and stipends.

Three State technical scholarships are awarded annually to enable students of the province to obtain a specialised training abroad. Of the eleven State scholars studying abroad, nine are in England studying such subjects as mining, electrical engineering, oil technology, dyeing and printing and mechanical engineering. One student has been sent to Germany for training in electric porcelain manufacture, after completing his training in England, while another completed a course of training in sugar manufacture, during the year. During the year sixty-five stipends were also provided to enable students to train within the province or elsewhere in India in industrial subjects.

Cost of living.

Since 1922 the Industries department has published index figures showing the changes in the cost of living for the working classes in seven urban and industrial centres of the province, namely, Patna, Muzaffarpur, Monghyr, Jamshedpur, Jharia-Katras, and Cuttack. Ranchi was added in 1925. The level of the pre-war period ending 1914 is taken as the normal (100). Cuttack continued to maintain its position as the cheapest centre except in May, when, owing to a rise in the price of foodstuffs, it was temporarily displaced by Ranchi. In the months, May to August, Jharia displaced Jamshedpur as the most expensive centre, but during the remainder of the year Jamshedpur occupied its former position. The general level is still very much above the pre-war normal, while the relative difference in cost is striking. Taking the mean average of the whole year it was 44 points cheaper to live in Cuttack than in Jamshedpur (195).

Ports and railways.

The province possesses no port of any size on its sea board in the Bay of Bengal. Since the closing of the port at Hukitola in 1924 there are only two places of call, Puri which is an open roadstead without any harbour, and Chandbali, which is situated more than 20 miles up

the Dhamra river. Chandbali has hitherto been regularly visited by a few small coasting steamers plying to and from Calcutta or exporting rice to Colombo and the South. But this service was withdrawn in September 1927 and since then there has been practically no trade in the port. All the railways of the province are primarily designed to feed the great port of Calcutta and it is only within recent years that some progress had been made in remedying the lack of proper through communications in the province. The Central India Coalfields railway which is nearing completion passes through the Damodar valley, midway between Ranchi and Hazaribagh in the centre of the province. This railway will link the Jharia, Bokaro and Karanpura coalfields directly to Daltonganj to the west and eventually join them to the East Indian Railway main line near Katni, thus making a direct line to Bombay. The Barkakana-Chandil chord line is now open and enables coal from the Karanpura field to be taken direct to Jamshedpur and the south without passing through the congested junctions at Dhanbad and Asansol.

APPENDIX I.

A Short Summary of the Administration of Bihar and Orissa in 1928.

Changes in the administration.

His Excellency Sir Hugh Lansdown Stephenson continued as Governor of the province during the year. The Hon'ble Maharaja Bahadur Keshav Prashad Singh, C.B.E., Vice-President of the Executive Council, proceeded on six months' leave on the 17th April 1928. The Hon'ble Mr. J. D. Sifton, C.I.E., was appointed to be Vice-President temporarily, and the Hon'ble Sir B. K. Mullick, a judge of the Patna High Court, on the eve of retirement, was appointed a temporary member of the Executive Council. There was no change in the personnel of the Ministers. The Hon'ble Sir Saiyid Muhammad Fakhr-ud-din and the Hon'ble Sir Ganesh Dutta Singh continued in office, with the portfolios of Education and Local Self-Government, respectively.

His Excellency the Viceroy visits the province.

His Excellency the Viceroy paid two visits to the province during the year. Towards the end of July he visited Ranchi, the summer headquarters of the local Government, and thence proceeded to Puri where, accompanied by His Excellency the Governor, he inspected certain areas which are subject to periodic floods. In the month of November, His Excellency spent two days in Patna, this being his first official visit to the capital of the province. At both Ranchi and Patna, His Excellency received an enthusiastic public welcome.

The Statutory Commission.

Political interest during the year has centred round the Statutory Commission. The agitation, against the Commission showed no originality. Efforts were made to hold a general *hartal* throughout the province on the 3rd February, the day the Commission arrived in Bombay, but the attempt was a failure and, with a few exceptions, little interest was shown. Boycott of the Commission was advocated at public meetings and more vehemently in certain sections of the press, but the Muhammadans, with a few notable exceptions, were substantially on the side of co-operation. The Legislative Council, after a full debate in the Autumn Session, passed, by 50 votes to 44, a motion to constitute a provincial committee to co-operate with the Commission. Examination of the Nehru Report further consolidated the

ranks of the Muhammadans and led to the formation of a new Muslim Association which, in a lengthy note prepared for the Commission, definitely opposed the joint electorate proposals and demanded special representation, along with 50 per cent. of posts in the Services. The Commission, accompanied by the Committee of the Central Legislature, arrived in Patna on the morning of the 12th December. Adequate precautions were taken by the authorities and no untoward incident occurred. There was a small attendance of Muhammadans and others to welcome the Commission, and a well-organized gathering of some three to four thousand opposition demonstrators also turned out, but contented themselves with shouting and waving of black flags. Some of the Hindu shops in Patna City were closed till 11 A.M., but the threatened general *hartal* was a failure. During their stay of eight days in Patna the Commission examined eight official witnesses, in addition to the two members of the Executive Council and both Ministers. Deputations from the Bihar Landholders' Association, the Muslim Association, the Sanatan Dharma Sabha and the Yadava (Ahir) Sabha also appeared before the Commission, and a number of non-official witnesses representing the backward aboriginal tracts. The Commission left Patna on the night of the 19th December for Calcutta, some of them visiting en route Ranchi and others the Jharia coalfields.

Ill-feeling between Hindus and Muhammadans.

Relations between the two communities continued in a state of tension during the year particularly in the Tirhut division, where the magistracy and the police were subjected to considerable strain and anxiety. Elaborate precautions were, as usual, taken during the chief religious festivals, but fortunately outbreaks of rioting were few. Numerous instances, however, came to notice, which, but for the vigilance of the local authorities, might easily have led to outbreaks on a large scale. Early in February an unpremeditated fracas, the result of a trivial incident at a mela in the village of Gidarganj, 14 miles from the headquarters station of the district of Darbhanga, developed into a communal riot in which over one hundred houses of Muhammadans were burnt down. It was considered necessary to quarter a force of additional police in the area. The Bakr-Id passed off peacefully throughout the province, except for two incidents on the border of Muzaffarpur and Darbhanga districts, a little to the south of the area where disturbances occurred during the Bakr-Id of 1926. In the first instance, five Muhammadan houses were looted, and in the second one Muhammadan was killed and a few injured. Minor incidents

in which both Hindus and Muhammadans were injured were also reported from Darbhanga and Gaya. The celebration of the Muharram festival was marred by only one minor fracas in Darbhanga.

Mahabirdal processions, which were the occasion of serious rioting at Bettiah last year, were again celebrated with provocative display in the Tirhut division. In Saran this year they were the cause of many anxious situations and were undoubtedly protracted for an unduly long period to provoke the Muhammadans. During the Dasahara festival in the town of Gaya, one of the Durga idols being taken in procession, caught fire. The suspicion of the Hindus fell on a Muhammadan car-driver and he was beaten severely. The Superintendent of Police was assaulted and but for the restraint of the Muhammadans who kept strictly to their houses, a serious disturbance would have occurred. The publication of the Nehru Report did not tend to improve relation between the educated members of the two communities. The Muhammadans generally have no faith in the joint electorate proposals and with a few exceptions are united in condemning the report.

Labour unrest.

With the exception of a short-lived strike of 600 mica sorters at Kodarma in the district of Hazaribagh, labour trouble during the year was confined to the Tata Iron and Steel Works at Jamshedpur, where " strike " conditions prevailed throughout a period extending from the 1st June to the 12th September, though there had been uneasiness and discontent among the Company's labour for some time previously. This state of affairs was partly due to the general atmosphere of labour unrest all over India and was undoubtedly encouraged by the outcome of the railway strike at Kharagpur at the end of 1926. The direct cause of disaffection, however, was the action taken by the Company in the light of the comments on overstaffing in the Tariff Board's report, to reorganize the works with the ultimate object of reducing a staff that was heavily in excess of requirements and a serious factor in working costs. It was proposed to effect this reduction gradually, without discharging any of the men employed, by not filling vacancies until the excess had been absorbed. Concurrently with reduction of numbers, the wages of the individual workmen were to be increased. The policy, however, caused apprehension which manifested itself in a growing spirit of insubordination and lack of discipline in the works; and its detailed application to particular departments was the cause of sectional strikes in the early part of the year. The theory which has been advanced that the disaffection and strikes were the

deliberate work of communist agitators rests on very slender foundations; though certain avowed communists did visit Jamshedpur and make speeches, they exerted very little influence and soon fell into the background. There was no movement for a " general strike ", and a general absence of violence prevailed for which credit is due to the men's leaders, as well as to adequate and efficient police arrangements, and to the confidence which the Deputy Commissioner, in particular, and other officers of Government won from the workers as well as the management.

The trouble passed through various stages and between April 1927 and April 1928 was marked by spontaneous and sporadic departmental strikes directed against the reorganization policy. By the end of April the situation was seen to be deteriorating and the general spirit amongst the workers appeared to be worse than at the strikes in earlier years. Meetings of the discontented were held daily and were noticeable for their denouncements of the local Labour Association. Meanwhile its president, Mr. C. F. Andrews, was making efforts to deal with the increasing discontent and was in constant communication with the General Manager. At a mass meeting on the 14th April Mr. Andrews announced that the Company had sanctioned a generous profit-sharing scheme, but in spite of his strong advocacy it was not well-received. The scheme was in point of fact too late to stem the tide of disaffection, but Mr. Andrews, who regarded its rejection as ungrateful and unreasonable, left Jamshedpur in disgust. The Labour Association was gradually losing influence and the whole situation quickly passed out of their control into the hands of a Parsi by name Manek Homi, a Jamshedpur pleader formerly in the employ of the Company, who remained throughout the *de facto* leader of the strike. In addition to departmental strikes the tactics of periodic *hartals* were introduced, which disorganized the works and seriously affected their profit-earning capacity. The management therefore decided to close the works until a lasting settlement could be achieved and on the 1st of June the General Manager issued a notice declaring a lock-out. The number immediately affected by the Company's action was approximately 15,000 and only some 2,500 men who had ignored the *hartals* remained in employment.

It is to be noted that the strike was one of the skilled and semi-skilled workmen. The supervising staff took no part, and the cooly class, though kept out by picketting and promises, had little sympathy with it. Up to this time the points at issue between the Company and their workmen had not been clearly

stated and only general complaints against reduction of staff were heard and allegations of unfair treatment and insanitary conditions of work. At first a deadlock ensued, for want of a trusted channel of communication between the workmen and the management, as the latter had determined firmly to have no dealings with Mr. Homi and the recognized Labour Association had not the confidence of the disaffected workers. On the 26th June, however, the Directors issued a notice announcing the terms on which the Company was prepared to reopen the works. The offer of the profit-sharing scheme was renewed; all reasonable representations concerning increase of wages would be considered; a reduction of 25 per cent. of the men would be inevitable but this would make possible more increments than could otherwise have been granted; and revised service rules would provide specifically that the Company would not have to pay men for periods when the works or separate departments were closed for any reason. The terms were not favourably received and it became evident that the struggle was likely to be prolonged. Picketting increased in intensity and there was a certain amount of terrorisation and molesting of willing workers.

The intervention of Mr. Subhas Chandra Bose turned out to be the critical point of the struggle. The first result of his visit to Jamshedpur on the 18th August was an intensification of the strike in all its aspects; but subsequently he acted as a mediator and helped to bring about a settlement under which the workmen, by this time thoroughly wearied, returned to work on the 12th September. The terms of the settlement, however, gave the strikers little more than they had been offered a few months before. The direct loss to the Company owing to the strike has been estimated at about a crore of rupees; the indirect loss from general dislocation of business cannot be estimated. Approximately about a million and a half working days were lost in 1928, resulting in a loss to labour which has been estimated at Rs. 30 lakhs in wages.

All-India Trades Union Congress.

The session of the Congress at Jharia on the 18th December and following days aroused no local enthusiasm, though it attracted a number of visitors from other parts of India and a few agitators from further afield. The proceedings were without interest and call for little comment. On the last day over one hundred resolutions were hurriedly read out, and declared passed, in spite of protests against such precipitancy.

Legislative Council.

Two sessions of the Legislative Council were held during the year, of which the first took place at Patna and the second at Ranchi during the rains. In the course of the two sessions, the Council assembled on 29 days. Eight of these meetings were devoted entirely, and two partly, to non-official business. Khan Bahadur Khwaja Muhammad Nur and Babu Lakshmidar Mahanty continued to hold office as President and Deputy President respectively. There were three by-elections during the course of the year, of which only one was contested; but no change in the strength of the respective parties resulted. The Swarajist and the so-called " Independent Congress " parties still numbered practically half of the elected members of the Council. During the January session the Swarajist party attended in full force but abstained, apparently under orders from headquarters, from initiating any matter in the Legislative Council, and from taking part in the proceedings, except to oppose Government when any motion was moved, which was considered against the public interest.

Legislation.

Four bills, of which three were Government measures, were passed into law during the year, but none of these were of any great importance. The Bihar and Orissa Excise (Amendment) Bill, 1927, prohibits the production of cocaine in the province and raises the age-limit for the possession and sale of dangerous drugs and liquors. This bill was introduced in the previous year and by the desire of the Council had been circulated to elicit opinion and subsequently referred to a select committee, whose recommendations were embodied in the bill as passed into law. The Bihar and Orissa Opium Smoking Bill, 1928, was introduced at the instance of the Government of India and owed its origin to the obligations incurred by that Government in ratifying the various instruments adopted by the Geneva Conference of the League of Nations, 1925, to control the traffic in opium and other dangerous drugs. The bill which was passed without discussion, directly prohibits opium smoking, an exception being made in the case of addicts who are required to take out licenses. The third Government measure, the Patna Administration (Amendment) Bill, 1928, was also of a non-contentious nature. The bill, as passed into law, provides for the application or adaptation of the provisions of the Bihar and Orissa Municipal Act, 1922, to the provincial capital, in place of the Bengal Municipal Act, 1884, and validates all action previously taken under the Patna Administration Act, 1915. The Bihar and Orissa Public Demands Recovery (Amendment) Bill, 1927, was the only non-official

measure passed into law during the year. The bill as passed ensures an automatic stay of execution if an appeal is filed against the order of a certificate court, and makes definite provision for restitution where the order has been varied or reversed by a higher court.

Eight more bills were introduced during the year, all of which owed their origin to private members. In addition to these, there were also discussed six bills of which four were non-official measures which had been introduced the previous year. The most important of the bills introduced for the first time was the Bihar Tenancy (Amendment) Bill, 1928, which was brought forward on behalf of the landlords in accordance with an arrangement made in the previous year when a similar bill from the side of the tenants, the Bihar Tenancy (Amendment) Bill, 1927, was introduced. The Hon'ble Mr. Sifton on behalf of Government expressed disappointment with the bill which represented an extreme view of the landlord's party. But as it was the wish of the Council that the two sides of the case for revision of the tenancy law should be presented simultaneously and that a representative committee should see if any agreement could be hammered out, Government had decided to support the motion for reference to a select committee. The motion was adopted without a division. The Chota Nagpur Tenure-holder's Rent Account Bill which had already been before the Council in practically the same form on two previous occasions, was again brought forward by the member for Hazaribagh. Despite the opposition of Government, the bill was introduced and subsequently referred to a select committee. The Bihar and Orissa Muslim Wakf Bill, 1928, was intended to provide for the effective control and administration of Wakf properties, Muslim public trusts, and Muslim institutions, while the object of the Bihar and Orissa Hindu Religious Endowment Bill, 1928, was to ensure proper administration of Hindu religious endowments. Both bills were ordered to be circulated. The Bihar and Orissa Municipal (Amendment) Bill which sought to provide for the adequate representation of Muhammadans in municipalities was also circulated for eliciting opinion, as also was a bill to amend the Local Self-Government Act for the protection of Muhammadan interests in a similar manner in respect of district boards. The Orissa Tenancy (Amendment) Bill was referred to a select committee. This bill was intended to facilitate the consolidation of holdings by sanctioning mutual exchange of fields on payment of a nominal registration fee. Several bills which had been introduced during 1927 were also discussed. Two of these were Government measures. The Chota Nagpur Tenancy (Amendment) Bill,

1927, sought to amend the Chota Nagpur Tenancy Act, 1908, to facilitate the transfer of land for mining purposes. Under the present law, acquisition for these purposes is difficult as the land beneath which the minerals lie is in the occupation of raiyats and the law does not allow a raiyat to sell his holding. After some discussion the motion to refer the bill to a select committee was passed by 42 votes to 36. The Bihar and Orissa Mica Bill, 1927, aimed at preventing the theft of mica and regulating the extraction, possession and transport of and trade in mica. The remedy proposed in the bill was that all mining and dealing in unwrought mica within the mining area should be under license, and that mica should be transported only under passes and that every person engaged in these trades should keep accounts to show from what source the mica found at any time in his possession, was derived. Without even discussing the question, the Council negatived the proposal to refer the bill to a select committee.

Resolutions.

Twenty resolutions came up for discussion during the year, of which ten were withdrawn, two negatived and eight were adopted. Of the motions adopted, the most important was the Government resolution for the appointment of a committee of the Legislative Council to co-operate with the Statutory Commission. The resolution was opposed by the Swarajist party, but after considerable debate by 50 votes to 44, the Council agreed to the appointment of a committee. A resolution for the prohibition of the sale of intoxicants during religious fairs and festivals was carried by the narrow majority of 38 votes to 34. Another which was carried by 14 votes to 12 (Government remaining neutral) urged the adoption of Urdu as an optional script in the Tirhut, Patna and Bhagalpur divisions. Two motions for adjournment of the Council were moved during the year. The first was a motion to protest against remarks contained in the opinion of the Commissioner of Excise and Salt, on the mica Bill, which were interpreted as a reflection on the members of the Council. The motion was adopted without a division. The second was intended to draw attention to the havoc wrought by floods in north Bihar and to discuss the action taken by Government. The mover expressed himself satisfied with the relief measures taken by the authorities and withdrew the motion. The number of questions asked during the year showed a considerable decrease compared with last year's figures—363 against 674. Supplementary questions showed a still larger drop, being only 242 against 1,244 during 1927.

Budget discussions.

One day was devoted to the presentation of the budget, two days to general discussion, and nine days to the voting of demands for grants. Thirty-one motions for the reduction or omission of demands were discussed of which nine were rejected, sixteen withdrawn and six carried. Of these six four were motions for nominal cuts. The only demands refused entirely were first an item of Rs. 11,102 " Reclamation of Magahiya Doms " and second, a provision of Rs. 1,10,782 for the " Bengal and North-Western Railway Police—voted ", both from the police budget demands. The former motion was directed against the management by the Salvation Army of the Dom Settlement at Chautarwa in the district of Champaran, where it was alleged that pressure was being brought on the inmates to embrace Christianity. In vain did the Government spokesman assure the Council that their apprehensions were groundless and that no other philanthropic agency could be found in the province to undertake the unselfish work which the Salvation Army was doing, and that refusal of the demand would mean the closing of the settlement, thus letting loose a large number of unfortunate outcastes who would prey on society. The motion was carried by the narrow margin of 5 votes. With regard to the second motion it was explained on behalf of the Government that the general question in respect of all railways was under discussion with the Central Government and that every effort was being made to obtain more satisfactory contributions. The danger of omitting the provision altogether, was pointed out, but the Council apparently considered that this would be the more effective way of drawing the attention of the Central Government to the matter and by 44 votes to 32 the motion was carried. The whole of the provision for the Bengal and North-Western Railway Police was subsequently restored by His Excellency the Governor under the powers of certification conferred by section 72D(2) of the Government of India Act, while Rs. 10,102 out of the demand for the reclamation of Magahiya Doms was similarly certified. An attack on the pay of sub-registrars developed into a protracted debate on communal lines and the speeches were inclined to be excited and bitter. Indeed the budget session was remarkable for the repeated introduction of the communal question into practically every discussion. Forty supplementary demands and two demands for excess grants were placed before the Council. All were carried excepting two supplementary demands, one of which was refused and the other reduced by Rs. 837.

Local Self-Government: District Boards.

The main feature of the administration of district boards during the year has been almost universal financial difficulties. These difficulties are due partly to Government's inability this year to repeat non-recurring grants given for education and medical relief. These grants had been repeated for several years and the district boards had come to rely on them as a permanent feature of the budget. The financial difficulties of district boards are also due to the almost universal expansion of their obligatory recurring charges in the period since the Reforms, particularly on education and medical relief. Most boards have therefore reached the stage when their recurring income barely covers their recurring obligatory charges, and many have reached the further stage where without retrenchment the board's regular recurring income does not cover these charges.

On the administrative side there has been little scope this year for anything except consolidation, owing to the lack of funds described above. Some experience has been gained in the working of peripatetic public health organizations which have made progress both in elementary sanitary measures such as the disinfection of wells and in primitive conservancy work in the larger villages as well as in epidemic relief work such as the distribution of medicine and the performance of inoculation and treatment of patients in cholera and plague epidemics. Experiments with compulsory primary vaccination continued in selected areas and a scheme has been sanctioned during the year for transferring the responsibility for vaccination from the Civil Surgeon to the district board health officer in the Patna district.

The Ministry of Local Self-Government has made an important new administrative experiment by appointing a senior member of the Provincial Executive Service as a Special Inspecting Officer of local bodies. His duties are to get into touch with local bodies and their executives, to discuss their difficulties with them and to give them practical assistance. He works directly under the Ministry although he keeps in touch with the district staff. He thus has the advantage of being conversant with the problem of local self-government throughout the province and of being under the direct control of the Ministry.

Three district boards have become bankrupt during the year, one (Hazaribagh) owing to a heavy fall in its income from cess on collieries for a series of years due to the depression in the

coal trade; another (Balasore) owing to indulgence by the outgoing board in a comprehensive programme of rural water-supply though it had no funds to pay the bills. It misappropriated a large sum from Government grants earmarked for other purposes and left the new board to face the consequences. The third board (Gaya) recklessly increased its recurring liabilities under Education and Medical and simultaneously embarked on an ambitious programme of construction works (communications). Its finances were so involved that Government were compelled to supersede it early in November.

Municipalities.

Municipal administration displayed no features of particular interest. Tax collections continued to be unsatisfactory and there was no marked increase in income. But the tone of inspection reports was on the whole less pessimistic than in recent years and several of the smaller municipalities were reported to be running their administration as efficiently as the limited funds and materials at their disposal allowed. Audit objections were fewer and more attention was paid to the suggestions of inspecting officers of all kinds. Though in a few instances party factions continued gravely to hamper the administration, there were fewer instances than in previous years; and examples of the subordination of municipal administration to politics were much more rare.

A special Engineer has been appointed during the year to frame detailed estimates for a sewerage scheme in Patna; loans have been applied for and will be given next year for improvements and extensions to two municipal water-supplies; the reorganization of a third municipal water-supply proceeded during the year with the aid of a Government grant and loan; and a new post of Mechanical Engineer was created, half of whose time will be devoted to assisting municipalities in the preparation and execution of municipal water-supply and drainage schemes.

Audit.

Threats of surcharge under the Local Fund Audit Act have undoubtedly tended to check the commission of financial irregularities by the office staff both of district boards and municipalities. The executives of local authorities have also shown a marked tendency to consult the Examiner of Local Accounts and to improve their knowledge of law and financial procedure. A tendency on the part of local auditors to recommend unnecessary surcharges has been checked during the year and the Audit Department have commented on the appreciable decrease in illegalities

Public Health.

Final statistics for the whole of the year are not yet available, but on the basis of the eleven months ending with the 30th November, the provincial death-rate works out to 24.4 per mille as against 25.2 last year. Cholera again broke out early in the year with a severe epidemic in the Santal Parganas. In April, the neighbouring district of Monghyr and the Purnea district were severely affected, and by May and June, the disease had spread to practically all the districts in North Bihar. Shahabad and Gaya districts suffered severely. The total number of deaths during the year from this disease was again high (70,629). From its early outbreak in the province a very severe epidemic was anticipated and special arrangements were made to deal with it. Ten extra doctors were sanctioned for epidemic duty in March and later five more were appointed, so that altogether 25 epidemic doctors were employed in the various districts from April to September. The special reserve of vaccinators for epidemic duties was also increased, and it is partly owing to their efforts that the epidemic was not so severe as anticipated. Prophylactic measures were again undertaken on an extensive scale in connection with the Rath Jatra festival at Puri in July. Inoculation centres were established at Balasore, Cuttack and Puri and no fewer than 25,176 inoculations were carried out, while special sanitation measures were undertaken in Puri town. The results were remarkably satisfactory and very few cases occurred, whereas in former years this disease took a heavy toll of life at this festival. A large number of cholera inoculations were also performed in all the districts where cholera was prevalent and over one lakh of doses of vaccine were distributed free to local bodies. A large stock of *bacteriophage* was manufactured in the Public Health laboratories and a special officer was employed at Puri and elsewhere carrying out this new form of treatment. Until however all district boards can afford to maintain health officers and a special public health staff, and until the systematic disinfection of the water-supply is carried out before an epidemic occurs as well as after it has started, the usual preventive and curative measures can only touch the fringe of the problem.

Water-supply and drainage schemes.

The functions of the engineering department are first the maintenance of water-supply and drainage schemes in Government institutions and second to prepare schemes for water-supply and drainage for municipalities and to advise regarding their maintenance. The increase in the department's work and in the importance of the work has led Government to decide to

create a new mechanical division with a mechanical engineer at its head, whose main duties will be to supervise and control the maintenance of pumping installations in Government institutions and to assist the Superintending Engineer in the supervision of all municipal open waterworks. Effect will be given to the new scheme as soon as the requisite funds are voted by the Legislative Council. Of the work done by the department for municipalities perhaps the most interesting has been the experiment with shallow tube-wells in the attempt to find a suitable water-supply for Puri. A tube-well was sunk to a depth of 100 feet in the sandy area bordering the sea and test pumping was carried out for several months with satisfactory results. It is therefore hoped that a problem which has baffled solution for many years, has at last been solved. Work was commenced during the year on the Bhagalpur water-supply reorganization scheme, which is an important project estimated to cost more than seven lakhs of rupees. The department's portable pumping plants were sent free of cost to the Sonepore, Rajgir and Phulwari Sharif melas. A scheme for improvement of the water-supply at Sonepore mela was completed at the cost of Rs. 18,589, borne by Government and the installation for piped water-supply will, if Council vote the funds, be carried out next year. The reorganization of the water-supply and the drainage scheme for the Cuttack Ravenshaw College and the water-supply to the Cuttack Medical College were completed during the year. A rough outline sewerage scheme for the west end of Patna City municipality was prepared by the department and Government have decided to appoint a special engineer on contract for a year to work out the details of the scheme. The cost of the work actually carried out by the department increased from Rs. 5·8 lakhs to Rs. 6.14 lakhs. This does not include expenditure on works executed under the supervision of the department which also rose from Rs. 9·11 lakhs to nearly 11 lakhs of rupees.

Medical education and research.

The Prince of Wales Medical College, Patna, has now been in existence for over three years and continues to show satisfactory development. The College is now well equipped and the Physiology department when finished will be a model of well-considered efficiency. There were 195 students on the rolls and satisfactory entries still continue. Members of the Health Committee of the League of Nations visited the College in January and commented favourably on the standard of teaching. The two medical schools at Cuttack and Darbhanga were working

satisfactorily during the year and turned out 78 qualified medical practitioners and 63 trained compounders. The Radium Institute was transferred in July from Ranchi to Patna, where treatment will be carried out more advantageously in conjunction with specialist physicians and surgeons. With the Institute attached to the Medical College, facilities are now available for teaching students the use and value of this important therapeutic agent. Despite the fact that Radium treatment is now available at Calcutta, Madras, Bombay, Indore and Dehra Dun, the number of patients continues to increase and the All-India character of the institute is being maintained. Good progress has been made with the construction of the Itki Sanatorium for the treatment of tubercular disease. It is hoped to open this sanatorium in April 1929. The mental hospitals for Indians and Europeans at Kanke near Ranchi continued to have almost more work than they are able to cope with. The Indian hospital receives patients from Bengal and Bihar and Orissa and though it provides accommodation for 1,286 patients, the problem of overcrowding is still the subject of serious consideration. Both hospitals were visited by the Health Committee of the League of Nations during the year. Arrangements are now well in hand for the staffing and equipment of the Pasteur Institute at Patna, which is expected to be opened in June of next year. A scheme for the tackling of leprosy relief in the early stages of the disease has now been approved by Government. A special staff of doctors will visit and survey the districts in which leprosy is known to be most prevalent, will open leprosy clinics for outdoor treatment of the disease, and will train the local doctors to carry on the work after their departure. This staff will, if Council vote the funds, be entertained next year. There are now eight asylums and five leprosy clinics in the province. Special grants of Rs. 10,000 and Rs. 12,000 were made by Government to hospitals for the treatment of kala-azar and venereal diseases respectively, which are prevalent all over the province. In August the " Bihar and Orissa Maternity and Child Welfare Society " was formally registered as a society under the presidency of Lady Stephenson, who has created a trust fund amounting to about half a lakh of rupees, the interest of which will be spent on the maintenance of maternity and child-welfare centres in Patna. A centre has also been opened at Monghyr, through the generosity of Raja Deokinandan Prasad Singh, who gave Rs. 20,000 for the purpose; and, if Council vote the funds, the post of Maternity Supervisor will be created next year in Cuttack to develop maternity and child-welfare work there.

Hospitals and dispensaries.

Thirteen new dispensaries were opened during the year and three dispensaries were closed, one by the Hazaribagh and two by the Gaya district boards. The total number of hospitals and dispensaries in the province is now 668. The serious financial position of most district boards is certain to restrict expansion in this direction. At the Patna General Hospital a new hospital for women was opened in February, with buildings and equipment on a liberal scale. Electric fans were installed during the year in all wards of the Patna General Hospital and have added greatly to the comfort of patients. No efforts are being spared to improve the higher branches of medical relief and research in the province. A provincial bacteriological laboratory was opened in the Patna General Hospital where pathological specimens from all hospitals are examined free of charge. A new outdoor department and infectious wards were opened at the Dumka Sadr hospital. Most of the sadr and subdivisional hospitals have now qualified lady doctors on their staff for giving medical aid to women.

Weather and crops.

Taken as a whole weather conditions during the year were not unfavourable to the cultivator. Light rainfall early in the year was beneficial to the standing crops and the outturn of *rabi* and sugarcane was not much below the normal. For the rains crops spring showers facilitated preliminary cultivation generally and favourable conditions resulted in an increase of jute sown. The monsoon commenced early in June and rainfall was above the normal except in the Tirhut division and in the districts of Purnea, Ranchi, Singhbhum, Sambalpur and Puri. Widespread and abundant rain in the following month was beneficial to the *bhadai* crop and transplanting operations were completed at the normal time. In August the monsoon weakened and rain was defective in the Chota Nagpur division and in certain other districts. In Muzaffarpur and Darbhanga however rainfall was excessive and in these districts as well as in Bhagalpur the crops were damaged by floods. In September throughout the province rainfall was defective, except in Orissa, and the prolonged break caused considerable anxiety, damage by drought being reported from Patna and Saran.

These fluctuations in the monsoon affected the *bhadai* crop which was only moderate. The return is estimated at 69 per cent. of the normal. The excess rain in June and July was particularly unfavourable to the maize crop which was only 62 per cent. of the normal. There was an unusually good general rainfall in the

first half of October and, although this came too late to benefit the autumn rice crop which is estimated at 73 per cent. of the normal, it saved the winter rice and materially improved its condition everywhere except in Puri, where some damage was caused by heavy rain accompanied by high winds. The result is that the winter rice crop generally is good and the outturn for the whole province is estimated at 90 per cent. of the normal and 100 per cent. of the decennial average, a few districts having bumper crops. The price of rice is consequently falling and at the end of the year was cheaper by about one-fourth of a seer per rupee than at the same period last year. The average price of maize rose during October and November and is now higher than it was in June. The sugarcane crop in Muzaffarpur and Darbhanga was materially damaged by the floods in July, while in the neighbouring district of Saran the crop suffered from drought. The crop for the province as a whole may be classed as fairly good, the improvement after the *hathia* rains being noticeable and the yield is expected to be up to the average.

Floods.

After two successive disastrous years the Orissa districts enjoyed comparative immunity from floods and in the rest of the province the only areas affected were the districts of Muzaffarpur and Darbhanga.

Excessive rain during the early part of the monsoon swelled the rivers in North Bihar, which burst their banks and inundated about 1,070 square miles in the sadr and the Sitamarhi subdivisions of the Muzaffarpur district. There were two floods in the district, one between the 8th and 19th July and the other from the 5th to the 12th August and the lands were twice inundated. The damage to crops was severe at the time and about 75 per cent. of the *bhadai* crop was lost while 50 per cent. of the winter crops were affected. But the damage turned out to be less than was at first anticipated and a good deal of the loss was subsequently made good, as *takavi* was given out at once which enabled the cultivators to transplant a considerable amount of rice land and good *hathia* rains in October saved the situation. Fortunately there was no loss of human life or cattle or of stored grain and little damage was done to house property. The roads and bridges of the district however suffered severely. The total amount of *takavi* distributed was Rs. 37,000 of which Rs. 25,500 was for *aghani* sowings. The neighbouring district of Darbhanga suffered more severely. The floods came down on the 7th August and parts of the Madhubani and sadr subdivisions and the greater part of the Samastipur subdivision remained under water for fully a fortnight. The effect

of the floods on the standing crop was very serious and almost the whole of the *bhadai* crop was destroyed. The rice crop also suffered much damage. The classes most affected were the labourers and small cultivators. Immediate and thorough measures were taken to relieve the distressed and gratuitous relief and loans for sowing both rice and *rabi* crops were distributed on a liberal scale by the district officials actively assisted by the local bodies and by non-officials. The total amount distributed in Government loans was Rs. 1,80,000 while the co-operative banks advanced about half a lakh of rupees. Nearly Rs. 12,000 was spent on gratuitous relief and on the repairs of houses damaged by water. The floods were succeeded immediately by a period of drought and at one time it was feared that the lack of rain would cause further distress. Good rain early in October however saved the situation. The damage caused to district and municipal roads was estimated at over a lakh.

The Orissa Flood Committee.

The expert committee set up by the Government of Bihar and Orissa to investigate the problem of the recurrence of floods in the coastal districts of Orissa, submitted a lengthy and comprehensive report in August of this year. This is the first authoritative review of the flood problem as a whole by recognized experts and is therefore of considerable importance. The committee came to the general conclusion that the problem which has arisen in Orissa is due in the main to the efforts which have been made towards its protection from floods. Orissa is a deltaic country and the problem is not how to prevent floods, which in such a country are inevitable, but how to pass them as quickly as possible to the sea. The solution lies in removing all obstacles which militate against this result and a radical change in the whole system of flood protection is proposed. The committee have described in a graphic way the shackles with which the rivers of Orissa have been bound. The flood problem is confined to three of these rivers, the Baitarani, the Brahmini and the Mahanadi which splay out into deltas within a comparatively short distance of the coast. In their passage to the sea the rivers pass through tracts in which the direction of their overflow is controlled by numerous embankments, constructed partly by Government and partly by local zamindars. The embankments take two forms. There are marginal embankments running along the banks of the rivers, and there are " ring *bandhs* ", that is, embankments which completely enclose villages and estates. These have obviously come into existence in the interests of the

area to be protected and with complete disregard of their effects upon other areas. Every square mile of country from which water is excluded means the intensification of floods elsewhere; every embankment means the heading up of water on someone else's land. The committee therefore recommend that concerted action should be taken towards the gradual clearance of such obstructions, in the first instance in the semi-protected areas. The process will have to be gradual, commencing from the sea, and the case of each embankment will have to be considered on its merits. Some, the committee considers, will have to be demolished entirely but there are probably some which may be retained and still more which can be rendered innocuous by reducing their capacity for obstruction by the provision of escapes in them. Every embankment marked for permanent retention, however, must conform to two requirements: it must offer no obstruction to floods in excess of certain dimensions to be determined in each case, and it must be absolutely secured from breaching even in an exceptional flood. The removal of obstructions to the working of nature, whether in the form of floods or tides, is in the opinion of the committee, the only cure for the troubles to which Orissa is now subject. If a policy to this end is pursued, except in so far as it must be relaxed to ensure the maintenance of the population, steadfastly and if needs be, ruthlessly, they believe that much of the distress which at present exists can be removed and more stable conditions ensured throughout the country.

Agricultural Development.

No account of the work of the year would be complete without a reference to the report of the Royal Commission on Agriculture published in July. Among the more important of the Commission's recommendations which affect this province may be mentioned those which deal with the opening of an Agricultural College, increased activities necessitating greatly increased expenditure on agricultural research, the improvement of live-stock, agricultural engineering, propaganda, seed supply, and a better service generally to the cultivator. These and other recommendations are receiving the earnest consideration of the local Government, but the poverty of the province must prevent their initiation on any effective scale. In many ways however agricultural progress in this province has been moving on the lines recommended by the Commission, and lack of funds alone has been responsible for the slow advance. Supplementary grants during the year have rendered possible progress in certain directions. For instance the department's activities in well-boring have been enlarged, a scheme

has been started for intensive propaganda with peripatetic demonstrators equipped with travelling outfits of improved agricultural implements and a large number of bulls for the improvement of milch buffalo herds have been supplied. The new method of financing stocks of seeds and implements for supplying to cultivators, which makes no call on the provincial budget, and increased collaboration with co-operative societies in agricultural propaganda and seed supply, will also facilitate progress. The outstanding features of the year's work are a considerable addition to the list of definite results from experimental work and a distinct development of propaganda work to bring these to the notice of cultivators. Reference may be made to the success which has been achieved with strainer tube-wells; at a very moderate cost the small engineering staff constructed 12 such wells. The knowledge of the strata met with in borings down to 300 feet indicates that this kind of well has great possibilities in the greater part of Bihar and in some parts of Orissa. It is unnecessary to emphasize the great value of such assured supplies of irrigation water in a densely populated tract, or the stimulus thus given to more intensive farming. Work on the various crops has led to much more definite information as to the varieties suitable for particular tracts. A marked example is " Co. 213 " sugarcane which has become a standard variety throughout the province, while *dahia* paddy is also in general demand. Steady progress has also been made in knowledge of the conditions which render profitable the use of quick-acting nitrogenous and phosphatic manures and in the demonstration of such manures in suitable areas.

Veterinary work.

The building of the new Veterinary College at Patna has made good progress and if the work of construction is completed and the requisite staff can be recruited in time, it may be possible for the College to open its first session in July 1929. Meanwhile the services of the Bengal Veterinary College continued to be utilized for the training of veterinary students from this province, and 12 students joined the College during the year. The buildings of the cattle-breeding and dairy farm, Patna, which is situated alongside the new Veterinary College and will provide the students with practical training in animal husbandry and allied subjects, were nearly completed. The farm herd consisted of 6 bulls and 156 cows, besides bullocks and young stock, and over 73,000 lbs. of milk were sold to the Patna hospital and to the public during 1927-28.

In respect of disease among live-stock 7,840 outbreaks were brought to notice during the calendar year 1928, of which 6,216

were attended by officers of the department. Out of 131,133 animals affected, 19,621 died. Foot and mouth disease was responsible for a large number of seizures. No less than 192,631 patients were treated at hospitals and in the interior. One of the most important branches of the department's work is the protection of cattle against disease by inoculation carried out mainly by the touring veterinary assistant surgeons in the villages. In the early years of the life of the province, before the prejudice against inoculation had been overcome, only about 20,000 cattle were so treated each year. During the first nine months of this year, for which records are available, the number reached the huge total of 220,705 inoculations, which in itself gives a fair idea of the development of the department. The staff however is insufficient to cope with the demands made upon it in a normally healthy year, and becomes altogether inadequate in an unhealthy one. During the year the Royal Commission on Agriculture in India published its report in which a large increase of staff in the provincial veterinary department is recommended. The Commission's recommendations are receiving the close attention of Government, but the financial outlook of the province does not unfortunately justify any hope of funds being available for this purpose in the near future.

Co-operative Societies.

The co-operative movement continues to show progress on sound lines. During the year 1928, 627 new societies were registered, bringing the total number of societies of all kinds up to 9,111. Three new central banks were established, of which there are now 68 in the province. Of the new societies, mention may be made of the Pioneer Co-operative Housing Society, Ltd., registered at Patna, which is intended to relieve the housing difficulties of members, in the provincial capital. The society is the first of its kind in the province. A society has also been organized for the first time amongst the Magahiya Doms, a criminal tribe in the Saran district. One hundred and three societies went into liquidation during the year. As an experimental measure, a whole-time liquidator was appointed for the district of Gaya, and if this new departure is successful, a liquidator for each division will be appointed. It has been found that liquidation proceedings under the guidance of central banks are not expeditiously carried out, resulting in accumulation of interest due to members and confusion in accounts. The policy of restricting expansion in order to devote greater attention to the improvement of existing societies was continued during the year and is reported to have been successful. Further

deterioration has been arrested and the work and organization of existing societies have been improved. Closer and more effective supervision is now being exercised by the central banks, but there is still room for improvement in this direction. Statistics continue to show that the co-operative movement is steadily improving the material condition of the people. In interest alone, the saving to members is calculated to amount to over Rs. 10 lakhs a year, which is reflected in their deposits which came to about Rs. 4½ lakhs in 1926-27. At the end of the same year the total of the reserve fund of the societies in the province was Rs. 22,73,848 while the paid up share capital stood at Rs. 11,70,545. The societies also co-operate closely with the agricultural and other departments of Government and are doing excellent work in the improvement of land, crops, village sanitation, veterinary work and social service.

Industrial and technical education.

Facilities for technical and industrial education, the provision of which is one of the main concerns of the Department of Industries, continued to be well-maintained. In 1927-28 expenditure under this head amounted to over Rs. 5½ lakhs, or more than two-thirds of the total expenditure of the department. The Bihar College of Engineering showed a satisfactory year's work, despite many difficulties as regards staff. Ten candidates, of whom eight passed, appeared in the final examination for the degree of B.C.E. The College has applied to the Institute of Civil Engineers (India) for recognition of its degree in Civil Engineering. The standard, both social and educational, of applicants to join the artisans' class has shown a remarkable rise and the demand for their services after the completion of training has been very encouraging. One hundred and twenty-three students were on the roll of the Orissa School of Engineering at the end of March. The results of the subordinate examinations were, however, poor: only 13 students passed, out of 31 who appeared at the examination. The sub-overseer examination results were better and 28 out of 36 passed, 8 being placed in the higher division. The new workshop plans have been revised and their construction is now well in hand. The Technical Institutes at Ranchi and Muzaffarpur continued to do good work among the mechanical apprentice class. In Muzaffarpur 5 out of 7 who appeared in the final examination were successful and entered the Bengal and North-Western Railway workshops at Samastipur for practical training. The evening mining classes in the coalfields area, the cost of which is shared with Bengal, were well attended during the year and the number of Bihari

candidates for stipends was again satisfactory. Technical classes for giving training in composing, letter-press printing and book-binding which were opened recently in the Government Press at Patna showed an increase, 30 students being on the roll at the end of March, compared with 23 in the previous year. Assistance in the form of grants-in-aid is also given to a number of private institutions, notably the Jamshedpur Technical Institute and the Jamalpur Technical School, for both of which, in the beginning one-third of the capital cost was found by the local Government, Rs. 2½ lakhs in all. In March there were 50 students on the roll at Jamshedpur of whom 21 were from Bihar and Orissa. Out of 14 students who joined this Institute in 1925, 12 passed and were immediately taken on by the Tata Iron and Steel Company; three of these were Biharis. Seats for students from this province are also reserved at the Calcutta Research Tannery, the Victoria Jubilee Technical Institute, Bombay, and the Indian School of Mines which has recently been started by the Government of India at Dhanbad. Sixteen new stipends were granted during the year to students for training outside the province. Three State scholarships are awarded annually to enable students of the province to obtain a specialised training abroad. Eleven such students were in training during the year in England and America.

Industrial development.

The activities of the department in this direction comprise both experimental and propaganda work for the improvement of industrial methods in the province, and may be roughly divided into four branches, viz., (1) textile, (2) engineering, (3) fisheries and (4) State aid. The total expenditure on these branches of the department's work, excluding the cost of direction, amounted in 1927-28 to Rs. 1½ lakhs. The work of the textile branch consists mainly of the introduction of improved appliances among the weavers and other classes of artisans by means of stationary or peripatetic demonstration parties, their practical training at Government institutes, and the introduction of improvements in the trade organization of such industries. Several important projects were sanctioned during the year and await the provision of funds. The branch also aims at securing wider markets for the products of cottage industries by introducing improved patterns and by advertising both in India and Europe. Bihar pardahs, bedspreads and silk goods were exhibited at the British Industries Fair in London this year and also at the Canadian National Exhibition at Torato in March. Sales by the London agent of the department increased from £602-12-8 in 1926-27 to £2,745-4-7 during 1927-28. The

Government demonstration match factory at Patna was closed down in October 1927 and steps are being taken to dispose of the machinery and other stock. During its brief career the factory showed a total loss of about Rs. 17,000 mainly on account of a heavy fall in the market rate of finished matches. The output was never satisfactory, due mainly to the bad quality of wood and its irregular supply, inefficient labour and lack of skilled men to work the machines. The survey of the fisher villages on the Chilka lake, completed during the year, brought to light the existence of an indigenous system of elementary education. A scheme to improve the schools with practical vocational trading appertaining to the fisher trade is engaging attention. The services of the Director of Fisheries, Madras, have been obtained to investigate and report on the desirability and feasibility of establishing a biological station on the Chilka lake with the object of ascertaining what measures, if any, are necessary for the further development of the lake and also whether its natural replenishment is sufficient to keep pace with its growing exploitation. The Bihar and Orissa State Aid to Industries Act was passed in 1923, since when, aid in the form of loans and cash credit has been granted to the amount of nearly Rs. 6½ lakhs. The largest amount was Rs. 5 lakhs made in 1925 in the form of debentures to the Indian Steel Wire Products, Limited. This Company had to close down with the result that the trustees appointed under the debenture trust deed, had to take over the concern and to dispose of it at considerable loss to the debenture-holders. The Act also allows Government to purchase plant and sell it on the hire-purchase system and some use was made during the year of this method of helping industries, while cash credit was also given in a number of cases. The department also serves as an enquiry office on industrial and commercial matters and in matters relating to industrial and technical education. Work under this head was heavy during the year and the section is being reorganized to cope with the increasing volume of work.

Higher Education.

There are now 7 first grade and 4 second grade arts and science colleges in the province, in which the number of students was 3,364 and 212 respectively at the end of March 1928. Of the post-graduate students in the Patna College, 99 were also reading law. The University has under consideration measures to alleviate the evils attendant on such attempts to combine and complete within two years two post-graduate courses, one at least an exacting task; action is certainly called for, since at present work in the post-graduate classes is seriously prejudiced by this combination.

There is still a considerable volume of opinion in the province demanding an immediate change in the character of the Patna University from a purely federal one to one which undertakes teaching as well. A private bill with this object in view [the Patna University (Amendment) Act, 1927] was discussed at considerable length in the Legislative Council in the autumn session, and by a majority of seven was ordered to be circulated for eliciting opinion. The same question had already been referred by the Senate to a special committee in 1927. Their recommendations, with slight modification, were submitted to Government, who referred the matter back, pointing out certain difficulties which had to be overcome before effect could be given to these recommendations, and it yet remains for the Senate to arrive at definite conclusions on the subject. The new Science College at Patna came into existence in July 1927, but only part of the buildings was then complete. The College was formally opened by His Excellency the Viceroy on the 15th November 1928.

Secondary education.

Including middle vernacular schools the total number of secondary schools at the end of March was 778, with 114,764 pupils, compared with 730 such schools and 101,793 pupils in the previous year. Direct expenditure rose from Rs. 32,29,583 to Rs. 34,19,642. All middle vernacular schools were converted into middle English schools by the district boards of Gaya and Manbhum. This is undoubtedly due to the strong demand for English teaching for children as close as possible to their homes, a demand which comes from parents and pupils themselves and is in curious contrast with the demand of public men and many experienced teachers for education in the vernacular at least up to the matriculation stage. There were two additions, viz., the district boards of Saran, and Manbhum, to the number of local bodies which assumed control of the middle English schools in the area under their charge, on the conditions laid down by Government. This policy of decentralisation can be productive of very good results, but at present there are indications of a tendency on the part of some district boards to encourage the extension and improvement of education at the middle stage at the expense of primary education. The distribution of middle schools with reference to the needs of the locality is defective in many districts, and the housing and equipment of the majority are unsatisfactory. There are also several schools in which the number of boys in a class exceeds 40. Progress made in vocational education includes the opening of a class in agriculture and of classes in carpentry and tailoring in a few middle schools

in various districts. One inspector reports that local bodies take little interest in vocational education other than that, if any, given by the *charkha*; Spinning appears however to be losing popularity in most districts; the *charkhas* distributed free and on a liberal scale are normally lying unused and the appointment of spinning instructors by district boards has had no appreciable effect; indeed in two districts such posts have been abolished.

Primary education.

The number of primary schools continues gradually to increase. About half the revised district programmes for the expansion and improvement of primary education have now received the approval of Government. The existence of these programmes is undoubtedly effecting a gradual improvement in the distribution of primary schools. The control of primary education has been transferred by most district boards to local boards, and in some districts, e.g., Shahabad and Darbhanga, this process has been carried even further, the transfer having been made to some of the union boards. The powers enjoyed, whether by district, local, or union boards, are unfortunately not always exercised with due discretion. There has also been considerable delay in the payment of stipends to *gurus* in some districts, owing to some extent, though not entirely, to insufficiency of funds at the command of district boards. On this account many schools in Gaya and Balasore had not at the end of March received their stipends for the two previous quarters. Compulsory primary education in the Ranchi municipality is reported to be successful, but funds are required to complete the building programme. Experience shows that the original estimates of cost were too low and that the success of the scheme is largely dependent on the efforts of the inspecting staff of the department. As regards rural areas the experiment has been in force longest (since January 1925) in the Banki union in Cuttack district and the latest report indicates that it is a success as regards both the enrolment of pupils of school-going age and their attendance. There are schemes for compulsory education in the Chapra, Muzaffarpur and Dhanbad municipalities but effect cannot be given to them for want of funds.

Female education.

During the year ending March 1928, there was an increase in the number of educational institutions for girls, and of the girls under instruction, though incommensurate with the importance of the subject, the former rising from 2,971 (including 132 private seminaries) in 1926-27 to 2,978 (128 private), and the latter from 118,298 to 121,164. There are signs however, for example, increases in the

income from fees, etc., of a greater demand for the education of girls, stimulated perhaps by such Women's Associations as those at Patna, Cuttack and Ranchi, one of the main objects of which is the furtherance of female literacy. But progress is greatly hampered by want of funds and of qualified women teachers, as well as by social customs. There are still only four girls' high schools in the province but the number of pupils increased from 814 to 892. The number of middle English schools fell from 15 to 14, while the number of middle vernacular schools is now 12. There was an increase, from 2,783 to 2,795, in the number of primary schools, and from 65,711 to 65,908 in that of pupils attending them. The want of trained teachers in the training classes and in both secondary and primary schools is seriously felt. Last year a special scale of pay of Rs. 60—3/2—90 was sanctioned by Government for trained women matriculates in the Vernacular Teachers' Service. This however failed to attract the teachers required and a scale of Rs. 40—3/2—70 was sanctioned for women teachers of somewhat lower qualifications. The education of Muhammadan girls remains unsatisfactory, the *pardah* system preventing many promising pupils from pursuing their studies beyond the elementary stages. There are now troops of girl guides attached to most of the high and middle English schools, many of them doing excellent work.

Medical examination of school children.

The Minister for Education presided at a meeting of the educational and medical authorities of the province held in July at Ranchi to discuss the question of the medical examination of school children and students. It was decided to continue the medical inspection of high schools on the present lines and to extend the same arrangement to middle schools in urban areas on an experimental basis for one year. It was also decided that a re-examination of all boys should be carried out when they reach the age of 12 or 15, and that all colleges should be required to make arrangements for medical inspection, and treatment, utilizing for the purpose their hostel doctors. It was impossible at present to make arrangements for the medical inspection of primary schools.

Mines.

Another year of depression in the coal trade falls to be reported, and 69 more mines had to close down, leaving 320 mines working at the close of the year. Although fewer mines were worked, the output continued to increase and amounted to 14.6 millions of tons, against 14.1 millions in 1927. It may be noted,

however, that the increase in production in recent years has been mainly due to the development of the Bokaro and Karanpura coalfields in the district of Hazaribagh where natural conditions, especially the proximity of the coal seams to the surface, favour the production of cheap coal. In this area practically all the open collieries are State-owned and are worked by the Railway Board to meet the requirements of the State railways. During the year a scheme for the development by the Bengal Nagpur Railway of a colliery in the Talcher coalfields in Orissa was sanctioned by the Railway Board. These coalfields are situated nearer than the existing sources of supply to the greater part of the south-western system of this railway and the use of Talcher coal will result in a large saving in haulage charges. The year was marked by a regrettable accident in the Jharia coalfield brought about by a surface subsidence following on a collapse of underground underworkings. Three blocks of miners' barracks were involved, in which about 400 persons were sleeping at the time of the subsidence. Six persons were killed and five more were seriously injured. Apart from coal the number of mines worked during the year was as follows :—mica, 609; iron-ore, 7; manganese, 11; steatite, 6; chromite, 5; limestone, 12; stone, 82; clay, 12; slate, 7; gold, copper, apatite and kyanite, one each. Conditions in the mica trade improved during the year, resulting in a marked increase in the number of mines working that mineral. Production of copper is likely to increase in the near future. At Mosaboni in the district of Singhbhum ore reserves exceeding half a million tons are reported to have been proved. A dressing, smelting and refining plant of modern design is being erected on the bank of the Subarnarekha river, near the Bengal Nagpur Railway line and 8 miles by road from the mine. A ropeway 5¼ miles in length is being erected to carry the ore from the mine to the dressing and smelting plant.

The number of fatal accidents in mines was 120, as against the same number the previous year; the number of persons killed increased from 134 to 141. Serious accidents increased from 301 to 306 and the number of persons injured was 312 against 314 in 1927.

Survey and settlement operations.

During the year ending 30th September 1928, survey and settlement operations were continued in the districts of Puri, Cuttack, Balasore and the Santal Parganas and in the Kosi Diara tract of the Purnea and Bhagalpur districts; revision operations were commenced in the district of Ranchi.

An area of 2,468 square miles was cadastrally surveyed and the records of 1,681 square miles were attested. During the same period the records of 1,677 square miles were finally published and the rents of 588,167 tenants were settled. The revision settlement of the Porahat Estate in the Singhbhum district was sanctioned during the year and the traverse survey begins in 1928-29. Field work in the Ranchi district was handicapped by a severe outbreak of malaria amongst the staff, contracted in the unhealthy area under survey. Numerous economies were made with a view to keeping down the cost of settlement, mainly by simplification of procedure. The feasibility of the employment of air survey for cadastral work was further examined. The Air Survey Company has agreed to make a test survey at its own cost in a small area in the Santal Parganas. The object of the test is to ascertain whether aerial photographs can be brought to a sufficiently accurate scale to coincide with the maps of the previous settlement. If the test is successful, there will be no necessity for a traverse, and the cost of revision survey by air may compare favourably with revision survey by the ordinary method.

Forests.

During the year the Department continued to pursue a progressive policy of development and the area under systematic management based on modern scientific methods was slightly increased. The general attitude of the public, however, to forest policy is undoubtedly hostile. This is partly due to genuine ignorance, a failure to appreciate the benefits of well-conserved forests, and an unwillingness to look to the future. Education is necessary to overcome this attitude. A scheme to give publicity to the aims and objects of the Forest Department with the help of lantern slide lectures by forest officers at suitable centres has recently been sanctioned by Government. It is a hopeful sign that some owners of private estates now voluntarily seek the advice of the Forest Department. Several private forests were inspected during the year at the request of the owners and working plans or working schemes were prepared for their improvement and systematic working, while the owner of one large estate has opened negotiations with Government for the management of some of its forests. The activities of the Forest Department with regard to finding markets for hitherto unutilizable timber have met with considerable success. The air-seasoning shed at the Ranchi Technical Institute was completed during the year, and it is hoped that valuable data regarding the seasoning and utilization of the more important timber species other than *sal* may be obtained. Proposals to work

certain areas for the exploitation of pit props have also been approved, while a long term lease has been granted for the extraction of bamboos from the Angul forests for making paper pulp. A demonstration brood lac farm has also been started in conjunction with the Co-operative Department, with the object of bringing the actual cultivator into touch with improved methods of cultivation. The net surplus realized on the working of the department in 1927-28 was Rs. 1,46,284 as against Rs. 35,686 for the previous year. This represents 15 per cent. of the gross revenue but does not include the value of forest produce granted free or at reduced rates. In future, accounts are to be maintained of all revenue foregone by free grants. The scheme of work sanctioned for the provision of improved roads and buildings is being pushed on rapidly and will in time repay itself as better extraction facilities increase the value of forest produce and the improvement of residential facilities will do away with much of the sickness from which the forest staff still suffer to a marked degree.

Administration of Justice.

Both criminal and civil litigation in the province still continue to increase. The permanent strength of the Patna High Court which originally consisted of seven judges, including the Chief Justice, was increased to nine in January of this year by the absorption of the two temporary additional judges already in the Court. Even with this addition, however the Court was unable to cope with the arrears and two more additional judges were appointed from the 1st December 1928, for a period of nine months. The temporary appointment of several additional District and Sessions Judges was also found to be necessary. Some of the recommendations of the Civil Justice Committee are still under consideration. The experiment of having a Registrar for all the civil courts at the headquarters of the District Judges of Patna and Gaya was continued during 1928. Conflicting reports however were received from the District Judges of these places as to the success of the experiment.

Mr. Courtney Terrell assumed charge of the office of Chief Justice of the Patna High Court on the 31st March 1928, in place of Sir Dawson Miller who resigned from that date.

Towards the close of 1926 an interesting experiment was started in the Gaya Central Jail by the establishment of a class for the compulsory education of all Hindi-speaking prisoners of 25 years and under, serving sentences of over two years. The experiment has been successful and the scheme has now been sanctioned on a permanent basis. The minimum sentence for

admission to the class has been lowered to one year for adolescents in order to widen the scope of the scheme and admit a large number of young prisoners to the advantages of its beneficial and reformative influences. The prisoners are taught tailoring, weaving and other practical subjects, in addition to reading, writing and arithmetic.

Excise.

The total gross revenue for the year 1928 amounted to Rs. 1,90,20,592, a decrease of over 5 lakhs as compared with the previous year. The consumption of country spirit fell by 123,475 gallons and drugs with the exception of opium, also show a drop. During the twelve months which ended on the 31st March 1928 the total revenue was in round figures Rs. 197 lakhs, out of which the net revenue came to nearly Rs. 177 lakhs and represented a decrease of Rs. 22,000 as compared with the figures of the previous year. A decrease of Rs. 70,000 in excise charges was mainly under the head cost price of opium. The policy of combining an increase in revenue with a reduction in consumption was pursued in the enhancement of retail prices and license fees with certain increase in the rate of duty. The sliding scale system, described in detail in earlier reviews, worked satisfactorily and was further extended to all drug shops in the five districts of Hazaribagh, Ranchi, Palamau, Singhbhum and Sambalpur, and to four country spirit shops adjoining Jamshedpur and a shop in Sambalpur district. The results are striking and indicate the utility of the system in restricting consumption. The consumption of *bhang* in the new area showed a decrease of 34.8 per cent. which was accompanied by an increase of revenue of 7.3 per cent; consumption of *ganja* and opium in the same area fell by 10.2 and 9.5 per cent. respectively. With a view to restricting consumption of *ganja* in the Bihar districts of the province, where in recent years a steady rise had been noticed, retail prices have been increased during 1928. In Ranchi two distillery shops in the jungly area of Kolebira were reconverted into outstills. Apparently insufficient consideration was given to physical difficulties of supply when the outstills were replaced by shops. The reversion was the only possible means of checking illicit distillation. There was a decrease during the year 1927-28 in the consumption of country spirit by 57,648 gallons or 5.4 per cent. This was due chiefly to unfavourable economic conditions and partly to measures of reform introduced, during the year, the most important being the reduction in issue strength from 70 U. P. to 80 U. P. in Ranchi and the increase in retail prices accompanied by a reduction in the size of the bottle

in Monghyr. At the request of the aboriginal inhabitants in the Kolhan Government Estate in the district of Singhbhum, all country spirit shops were closed some years ago. Owing however to the demand of foreign labourers in the mining settlements and to the increase in illicit distillation and smuggling, three spirit shops had to be opened again during the year. Two of these shops are near foreign outstills but the third is in the interior and special steps have been taken to guard it against aboriginal customers. The tree-tax system for *tari* is an innovation introduced recently in the Dinapur subdivision and in certain areas of the sadr subdivision of the district of Patna. Under this system, a tax at a fixed rate is levied on each tree tapped for the production of fermented *tari*, in addition to a sale license fee for each shop, which is settled by auction. The tax was fixed at a nominal rate of Re. 0-8-0 for each date and palmyra tree tapped. In the beginning the system met with considerable opposition from the retail vendors but ultimately the opposition died out and the shops were settled when certain concessions were made to the Pasis. The system is still in an experimental stage and it is not possible as yet to gauge its results. 1,173 cases of illicit distillation were detected during the year against 1,200 in the preceding year. The number of cocaine cases and cases under the Opium Act were 75 and 130 respectively. Over 2½ lbs. of contraband cocaine were seized. In April a committee was appointed by Government to report on the connection between the heavy consumption of opium in the districts of Balasore, Cuttack, and Puri in Orissa, and the local conditions, climatic, physical, etc., prevailing in these districts. The committee's investigations were delayed by the floods of 1927, and it was not until June 1928 that they were able to submit their report, which is still under the consideration of Government. Meanwhile the Bihar and Orissa Opium Smoking Bill, 1928, was introduced in the Legislative Council at the instance of the Government of India. The bill, which was passed without a division, owes its origin to the obligations incurred by the Central Government in ratifying the various instruments adopted by the Geneva Conference of the League of Nations, 1925, to control the traffic in opium and other dangerous drugs. It comes into force on the 1st January 1929 and directly prohibits opium smoking, exception being made in the case of present addicts who register themselves as smokers under the Act.

The financial position.

The estimates for the year 1928-29 anticipated an opening balance on the 1st April 1928 of Rs. 165·5 lakhs, of which Rs. 69·4 lakhs represented the balance of the famine relief fund. Revenue was placed at Rs. 574·37 lakhs, while the expenditure debitable to

revenue to which Government were already committed (sometimes called " first edition " expenditure) was expected to amount to Rs. 572·27 lakhs. The margin, though small, was on the right side, but it was clear that it did not leave the local Government much scope for increasing its recurring commitments. Apart from this, it was to be considered whether this balance represented an assured margin of safety. The position when the budget was introduced was that the principal source of revenue (excise) had received a set-back. Land revenue, the second largest head, was, for historical reasons, practically at a standstill. Stamps, the third large head, was showing slow if steady progress. The other revenue heads are of minor importance, but taken altogether they also were showing slow development. On the other hand the local Government had come to the end of the assignments which they were required to make to the famine relief fund; they had almost reached the end of their repayments of the provincial loan account and they had set their face against new recurring expenditure on any scale. Taking these various factors into consideration therefore, the local Government considered that the balance of their resources and commitments was fairly shown by the relation between the anticipated revenue and the " first edition " expenditure of 1928-29. It was also decided that the minimum ordinary closing balance could be safely fixed at Rs. 75 lakhs which is something less than two months' average expenditure. Although therefore they were budgetting for a deficit the local Government decided after serious deliberation that they could safely draw on their provincial balance and provide a sum of approximately Rs. 16.70 lakhs to finance the most urgent of the new projects. The margin of safety, however, of their normal revenue over their normal expenditure, as shown above, was very meagre and it was considered that an ultimate extra recurring liability of Rs. 79,000 marked the limit up to which they could go this year.

The situation at the end of the year 1928 was slightly more favourable than anticipated. The actual opening balance on the 1st April 1928 has been finally calculated at Rs. 180.4 lakhs, that is approximately Rs. 15 lakhs in excess of the estimate. The closing balance at the end of March 1929 is now reckoned at Rs. 160.7 lakhs, including Rs. 57.1 lakhs in the famine relief fund. The province is still solvent but the fact of its extreme poverty remains, and will remain until there is some fundamental revision of the financial settlement. Until that wished-for event occurs, there is no prospect of contracting fresh recurring commitments on any scale as in the days when the excise revenue was on its upward course.

APPENDIX II.

A.—MEMBERS OF THE BIHAR AND ORISSA EXECUTIVE COUNCIL.

His Excellency Sir Hugh Lansdown Stephenson, K.C.S.I., K.C.I.E., I.C.S.

The Hon'ble Maharaja Bahadur Keshav Prashad Singh, C.B.E.

The Hon'ble Mr. James David Sifton, C.I.E., I.C.S.

B.—MINISTERS.

Ministry of Education: The Hon'ble Sir Saiyid Muhammad Fakhr-ud-din, Khan Bahadur, Kt.

Ministry of Local Self-Government: The Hon'ble Sir Ganesh Datta Singh, Kt.

C.—THE BIHAR AND ORISSA LEGISLATIVE COUNCIL.

The Hon'ble Khan Bahadur Khwaja Muhammad Nur.—President.

Mr. John Augustus Samuel, Bar-at-Law.—Secretary.

Mr. Saiyid Anwar Yusuf, Bar.-at-Law—Assistant of the Secretary.

EX-OFFICIO MEMBERS. (2)

The Hon'ble Maharaja Bahadur Keshav Prashad Singh, C.B.E.

The Hon'ble Mr. J. D. Sifton, C.I.E., I.C.S.

NOMINATED OFFICIALS. (14)

Mr. Blanchard Foley, C.S.I., I.C.S.

Mr. William Bissill Heycock, I.C.S.

Mr. Hugh Kynaston Briscoe, C.I.E., I.C.S.

Mr. Philip Cubitt Tallents, I.C.S.

Mr. Godfrey Elwin Owen, I.C.S.

Mr. Eric Cecil Ansorge, I.C.S.

Mr. Robert Edwin Russell, I.C.S.

Mr. Arthur Edgar Scroope, I.C.S.

Mr. Henry Abraham Gubbay, I.S.E.

Mr. Walter Swain, C.I.E., I.P.

Col. William Southwick Willmore, I.M.S.

Mr. Henry Lambert, I.E.S.

Mr. Ernest Leslie Glass, I.S.E.

Mr. Patrick William Murphy, I.C.S., (special).

NOMINATED NON-OFFICIALS. (4)

Raja Devakinandan Prashad Singh.

Dewan Bahadur Sri Krishna Mahapatra.

Khan Bahadur Shah Muhammad Yahya.

Mr. John Podger (special).

NOMINATED REPRESENTATIVES OF CLASSES AND COMMUNITIES. (9)

	Constituencies.
Rev. Thomas Lenman ...	Aborigines.
Rev. Pritam Luther Singh ...	
Rev. Brajananda Das ...	Depressed Classes.
Rev. Emanuel Sukh ...	
Rai Bahadur Bansidhar Dhandhania	Industrial interests other than planting and mining.
Rai Bahadur Kalipada Sarkar ...	The Domiciled Bengali Community.
Mr. Alfred Eustace D'Silva ...	The Anglo-Indian Community.
Mr. Sorab Solomon Day ...	The Indian Christian Community.
Rai Sahib Harendra Nath Banarji ...	The Labouring classes.

ELECTED MEMBERS. (76)

Patna Division. (16)

Mr. Saiyid Abdul Aziz ...	Patna Division Muhammadan Urban.
Maulavi Saiyid Muhammad Husain	East Patna Muhammadan Rural.
The Hon'ble Sir Saiyid Muhammad Fakhr-ud-din, Khan Bahadur, Kt.	West Patna Muhammadan Rural.
Babu Jagat Narayan Lal ...	Patna Division Non-Muhammadan Urban.
Babu Rai Brij Raj Krishna ...	Patna Non-Muhammadan Urban.
Babu Gur Sahay Lal ...	East Patna Non-Muhammadan Rural.
Babu Rajandhari Sinha ...	West Patna Non-Muhammadan Rural.
Raja Bahadur Harihar Prashad Narayan Singh, O.B.E. ...	Landholders', Patna Division.
Maulavi Qazi Ahmad Husain ...	Gaya Muhammadan Rural.
Mr. Rajkishore Lal ...	West Gaya Non-Muhammadan Rural.
Babu Bhagawati Sharan Singh ...	Central Gaya Non-Muhammadan Rural.
The Hon'ble Sir Ganesh Datta Singh, Kt.	East Gaya Non-Muhammadan Rural.

	CONSTITUENCIES.
Mr. Saiyid Muhammad Athar Husain.	Shahabad Muhammadan Rural.
Pandit Dudhnath Pande ...	Central Shahabad Non-Muhammadan Rural.
Babu Keshari Prashad Singh ...	South Shahabad Non-Muhammadan Rural.
Babu Sidheshvari Prashad ...	Arrah Non-Muhammadan Rural.

Tirhut Division. (19)

Maulavi Abdul Ghani	Tirhut Division Muhammadan Urban.
Maulavi Muhammad Ishaq ...	Muzaffarpur Muhammadan Rural.
Maulavi Abdul Hamid Khan ...	Darbhanga Muhammadan Rural.
Maulavi Saiyid Mubarak Ali Sahib ...	Saran Muhammadan Rural.
Khan Bahadur Muhammad Jan ...	Champaran Muhammadan Rural.
Rai Bahadur Dvarika Nath ...	Tirhut Division Non-Muhammadan Urban.
Mahanth Ishvar Gir	North-West Darbhanga Non-Muhammadan Rural.
Babu Shiva Shankar Jha ...	North-East Darbhanga Non-Muhammadan Rural.
Babu Girindra Mohan Misra ...	South-East Darbhanga Non-Muhammadan Rural.
Babu Satya Narayan Singh ...	Samastipur Non-Muhammadan Rural.
Thakur Ramnandan Sinha ...	North Muzaffarpur Non-Muhammadan Rural.
Babu Ramdayalu Sinha ...	East Muzaffarpur Non-Muhammadan Rural.
Babu Badri Narayan Singh ...	West Muzaffarpur Non-Muhammadan Rural.
Babu Dip Narayan Sinha ...	Hajipur Non-Muhammadan Rural.
Babu Srinandan Prashad Narayan Singh Sharma.	North Saran Non-Muhammadan Rural.
Babu Nirsu Narayan Sinha ...	South Saran Non-Muhammadan Rural.
Babu Harivans Sahay ...	North Champaran Non-Muhammadan Rural.
Babu Rameshvar Prashad Datta ...	South Champaran Non-Muhammadan Rural.
Chandreshvar Prashad Narayan Sinha.	Landholders', Tirhut Division.

Bhagalpur Division. (17)

	CONSTITUENCIES.
Khan Bahadur Abdul Wahhab Khan	Bhagalpur Division Muhammadan Urban.
Khan Bahadur Saiyid Muhammad Naim.	Bhagalpur Muhammadan Rural.
Chaudhuri Muhammad Nazirul Hasan.	Monghyr Muhammadan Rural.
Maulavi Haji Muhammad Bux Chaudhuri.	Purnea Muhammadan Rural.
Mr. Saiyid Moinuddin Mirza ...	Kishanganj Muhammadan Rural.
Maulavi Abdul Bari ...	Santal Parganas Muhammadan Rural.
Babu Rameshvar Narayan Agarwal	Bhagalpur Division Non-Muhammadan Urban.
Babu Rajendra Misra ...	North Bhagalpur Non-Muhammadan Rural.
Rai Bahadur Lakshmi Narayan Singh	Central Bhagalpur Non-Muhammadan Rural.
Babu Kailash Bihari Lal ...	South Bhagalpur Non-Muhammadan Rural.
Babu Kalika Prashad Singh ...	South-West Monghyr Non-Muhammadan Rural.
Babu Ram Charitra Singh ...	North-West Monghyr Non-Muhammadan Rural.
Babu Sri Krishna Sinha ...	East Monghyr Non-Muhammadan Rural.
Rai Bahadur Prithi Chand Lal Chaudhuri.	Purnea Non-Muhammadan Rural.
Babu Pratapendra Chandra Pande	Santal Parganas North Non-Muhammadan Rural.
Babu Rameshvar Lal Marwari ...	Santal Parganas South Non-Muhammadan Rural.
Rai Bahadur Dalip Narayan Singh	Landholders', Bhagalpur Division.

Orissa Division. (10)

Maulavi Saiyid Muhammad Nurul Huda.	Orissa Division Muhammadan Rural.
Rai Sahib Lokenath Misra ...	Orissa Division Non-Muhammadan Urban.
Babu Narayan Birbar Samanta ...	North Cuttack Non-Muhammadan Rural.
Babu Lakshmidhar Mahanti ...	South Cuttack Non-Muhammadan Rural.

	CONSTITUENCIES.
Babu Nand Kishore Das ...	North Balasore Non-Muhammadan Rural.
Chaudhari Bhagwat Prashad Samantarai Mahapatra.	South Balasore Non-Muhammadan Rural.
Babu Godavaris Misra ...	North Puri Non-Muhammadan Rural.
Babu Lingaraj Misra ...	South Puri Non-Muhammadan Rural.
Babu Braja Mohan Panda ...	Sambalpur Non-Muhammadan Rural.
Raja Rajendra Narayan Bhanja Deo, O.B.E.	Landholders', Orissa Division.

Chota Nagpur Division. (9)

Khan Bahadur Khwaja Muhammad Nur.	Chota Nagpur Division Muhammadan Rural.
Mr. Jimut Bahan Sen ...	Chota Nagpur Division Non-Muhammadan Urban.
Rai Bahadur Sharat Chandra Ray ...	Ranchi Non-Muhammadan Rural.
Babu Krishna Ballabh Sahay ...	Hazaribagh Non-Muhammadan Rural.
Babu Devaki Prashad Sinha ...	Palamau Non-Muhammadan Rural.
Babu Nilkantha Chattarji ...	South Manbhum Non-Muhammadan Rural.
Babu Devendra Nath Samanta ...	Singhbhum Non-Muhammadan Rural.
Babu Gunendra Nath Ray ...	North Manbhum Non-Muhammadan Rural.
Bhaiya Rajkishore Deo ...	Landholders', Chota Nagpur Division.

Others. (5)

Babu Baldeva Sahay ...	Patna University.
Mr. John Bowman Norman ...	European Constituency.
Mr. Edward Joseph Finch ...	Planting Constituency.
Mr. Edward Smedley Tarlton ...	Indian Mining Association.
Mr. Amrit Lal Ojha ...	Indian Mining Federation.

D.—MEMBERS OF THE COUNCIL OF STATE FROM BIHAR AND ORISSA.

NOMINATED. (1)

The Hon'ble Mr. Donald Weston, I.C.S.

ELECTED. (4)

The Hon'ble Maharajadhiraja Sir Rameshwar Singh, G.C.I.E., K.B.E., of Darbhanga.	Bihar and Orissa (Non-Muhammadan).
The Hon'ble Babu Anugrah Narayan Sinha ...	
The Hon'ble Babu Mahendra Prashad ...	
The Hon'ble Shah Muhammad Zubair	Bihar and Orissa (Muhammadan).

E.—MEMBERS OF THE LEGISLATIVE ASSEMBLY FROM BIHAR AND ORISSA.

NOMINATED. (2)

Rai Bahadur Bhuban Mohan Chatterji. (*Official*).

Khan Bahadur Nawabzada Saiyid Ashraf-ud-din Ahmad, C.I.E. (*Non-official*).

ELECTED. (12)

	Constituencies.
Khan Bahadur Sarfaraz Husain Khan.	Patna and Chota Nagpur *Cum* Orissa (Muhammadan).
Raja Raghunandan Prashad Singh	Bihar and Orissa (Landholders').
Maulavi Badi-uz-zaman ...	Bhagalpur Division (Muhammadan).
Maulavi Muhammad Shafi ...	Tirhut Division (Muhammadan).
Babu Narayan Prashad Singh ...	Darbhanga *Cum* Saran (Non-Muhammadan).
Babu Gaya Prashad Singh ...	Muzaffarpur *Cum* Champaran (Non-Muhammadan).
Pandit Nilakantha Das ...	Orissa Division (Non-Muhammadan).
Babu Bhubanananda Das ...	Orissa Division (Non-Muhammadan).
Babu Rajivaranjan Prashad Sinha	Patna *Cum* Shahabad (Non-Muhammadan).
Babu Siddhesvar Sinha ...	Gaya *Cum* Monghyr (Non-Muhammadan).
Babu Ganganand Sinha ...	Bhagalpur, Purnea and the Santal Parganas (Non-Muhammadan).
Babu Ram Narayan Singh ...	Chota Nagpur Division (Non-Muhammadan).

APPENDIX III.

ABSTRACT OF THE BUDGET ESTIMATE FOR 1928-29.

[IN THOUSANDS OF RUPEES.]

Revenue and Receipts.	Budget Estimate, 1927-28.	Revised Estimate, 1927-28.	Budget Estimate, 1928-29.	Remarks.
1	2	3	4	5
II.—Taxes on Income	4,83	3,31	3,34	
V.—Land Revenue	1,65,48	1,67,26	1,71,98	
VI.—Excise	1,97,50	1,95,00	1,95,50	
VII.—Stamps	1,08,00	1,09,52	1,09,25	
VIII.—Forest	10,69	10,72	10,39	
IX.—Registration	15,25	17,00	17,00	
XIII.—Irrigation, Navigation, Embankment and Drainage Works for which capital accounts are kept.	18,90	18,35	19,69	
XIV.—Irrigation, Navigation, Embankment and Drainage Works for which no capital accounts are kept.	1,03	1,06	1,05	
XVI.—Interest	6,13	7,27	6,47	
XVII.—Administration of Justice	5,34	5,20	5,14	
XVIII.—Jails and Convict Settlements ...	4,95	5,16	6,96	
XIX.—Police	1,80	1,79	1,72	
XX.—Ports and Pilotage	...	...	...	
XXI.—Education	6,11	6,28	6,47	
XXII.—Medical	1,73	1,83	1,87	
XXIII.—Public Health	20	27	79	
XXIV.—Agriculture	2,24	2,18	2,73	
XXV.—Industries	85	87	2,42	
XXVI.—Miscellaneous Departments	...	3	2	
XXX.—Civil Works	6,28	6,30	5,30	
XXXIII.—Receipts in aid of superannuation	3,87	1,21	1,16	
XXXIV.—Stationery and Printing	1,10	95	1,00	
XXXV.—Miscellaneous	4,79	3,91	4,13	
XXXIXA.—Miscellaneous adjustments between the Central and Provincial Governments.	35	...	...	
XL.—Extraordinary Receipts	...	...	...	
Total Revenue ...	5,67,42	5,65,36	5,74,37	
Loans and Advances by the Provincial Government ...	2,92	9,30	8,56	
Advances from the Provincial Loans Fund	...	...	...	
Famine Insurance Fund	19,42	17,84	12,57	
Suspense	5,70	3,50	2,75	
Total Receipts ...	5,95,46	5,96,00	5,98,25	
Opening Balance	(a)1,82,80	(b)1,93,35	(c)1,65,51	
Grand total ...	7,78,26	7,89,35	7,63,76	

(a) Ordinary balance			1,16,77
Famine Insurance Fund			66,03
	Total	...	1,82,80
(b) Ordinary balance			1,28,04
Famine Insurance Fund			65,31
	Total	...	1,93,35
(c) Ordinary balance			96,11
Famine Insurance Fund			69,40
	Total	...	1,65,51

APPENDIX III—*concld.*

ABSTRACT OF THE BUDGET ESTIMATES FOR 1928-29—*concld.*

[IN THOUSANDS OF RUPEES.]

Expenditure.	Budget Estimate, 1927-28.	Revised Estimate, 1927-28.	Budget Estimate, 1928-29.	Remarks.
1	2	3	4	5
5.—Land Revenue	24,03	23,90	26,28	
6.—Excise	19,63	19,26	18,50	
7.—Stamps	3,05	3,09	3,12	
8.—Forest	8,03	7,44	7,93	
8A.—Forest Capital outlay charged to revenue	1,42	1,33	1,36	
9.—Registration	6,28	6,41	6,48	
14.—Interest on irrigation works for which capital accounts are kept.	20,46	20,44	20,46	
15.—Irrigation Revenue Account—Other Revenue expenditure financed from ordinary revenue.	4,19	6,00	4,80	
15. (1)—Other revenue expenditure financed from famine insurance grants.	2	5	...	
16.—Irrigation Capital Account—Construction of Irrigation, Embankment and Drainage Works.	9	7	5	
19.—Interest on ordinary debt	1,87	1,93	1,33	
22.—General Administration	71,75	71,57	72,37	
24.—Administration of Justice	39,13	40,22	39,33	
25.—Jails and Convict Settlements	18,48	19,56	21,36	
26.—Police	83,24	83,20	84,45	
27.—Ports and Pilotage	1	...	1	
30.—Scientific Department	46	49	45	
31.—Education	86,89	87,55	87,60	
32.—Medical	29,87	27,61	29,71	
33.—Public Health	15,04	13,88	15,56	
34.—Agriculture	15,36	14,91	16,03	
35.—Industries	8,03	8,67	10,50	
37.—Miscellaneous Departments	37	42	32	
41.—Civil Works	93,20	90,33	79,47	
43.—Famine Relief and Insurance	11,48	11,47	1,00	
45.—Superannuation allowances and pensions	26,44	25,03	24,77	
45A.—Commutation of pensions financed from ordinary revenue.	...	—60	55	
46.—Stationery and Printing	9,40	9,06	8,83	
47.—Miscellaneous	1,34	1,41	4,80	
51.—Contributions to the Central Government by Provincial Governments.	...	...	...	
51A.—Miscellaneous adjustments between the Central and Provincial Governments.	...	1	...	
Total Expenditure charged to Revenue	6,00,46	5,04,21	5,87,97	
Commuted value of pensions	3,01	—12	—12	
Loans and advances by the Provincial Government	7,46	5,25	5,17	
Advances from the Provincial Loans Fund	7,31	7,30	7,64	
Famine Insurance Fund	4,30	13,75	5,98	
Suspense	5,50	3,45	2,75	
Total Expenditure not charged to Revenue	27,58	29,63	21,42	
Reserve for unforeseen	4,98	...	3,00	
Total Expenditure	6,33,00	6,23,84	6,12,39	
Closing balance	(a)1,45,26	(b)1,65,51	(c)1,52,37	
Grand total	7,78,26	7,89,35	7,63,76	
Provincial { Surplus	...	...	...	
Provincial { Deficit	37,54	37,84	18,14	

(a) Ordinary balance		64,11
Famine Insurance Fund		31,15
Total		1,45,26
(b) Ordinary balance		96,11
Famine Insurance Fund		69,40
Total		1,65,51
(c) Ordinary balance		75,38
Famine Insurance Fund		75,99
Total		1,51,37

APPENDIX IV.

SOURCES OF INFORMATION AVAILABLE TO THE PUBLIC.

Chapter I.

Report of the Orissa Flood Committee, 1928.

Chapter II.—Finance.

Financial statements for Bihar and Orissa for 1927-28 and 1928-29.

Debates in the Legislative Council on the budgets for 1927-28 and 1928-29.

Chapter III.—The Legislative Council.

Proceedings of the Bihar and Orissa Legislative Council, Volumes XVI and XVII.

Chapter IV.—Local Self-Government.

Resolutions reviewing the reports on the working of district boards and municipalities in 1927-28.

Chapter V.—Education.

Report on the Progress of Education in Bihar and Orissa for 1927-28.

Chapter VI.—Public Health and Medical.

Annual Returns of Hospitals and Dispensaries for 1927.

Annual Public Health Report for 1927.

Annual Report on the working of the Radium Institute for 1927.

Reports on the workings of the Indian and European Mental Hospitals for 1927.

Report of the Prince of Wales Medical College for 1927-28.

Chapter VII.—Maintenance of Public Peace and Administration of Justice.

Annual Report on the Administration of the Police for 1927.

Administration Report on Jails for 1927.

Report on the Administration of Civil Justice for 1927.

Report on the Administration of Criminal Justice for 1927.

Chapter VIII.—Excise.

Report on the Administration of the Excise Department for 1927-28.

Chapter IX.—Government and the land.

Report on Land Revenue Administration for 1927-28.

Report on Wards, Trust and Encumbered Estates for 1927-28

Annual Report of the Conservator of Forests for 1927-28.

Census of India, 1921, Volume VII.

Chapter X.—Agriculture.

Annual Report of the Agriculture Department for 1927.

Annual Report of the Civil Veterinary Department for 1927-28.

Annual Report of the Registrar of Co-operative Societies, Bihar and Orissa, for 1927.

Season and Crop Report for 1927-28.

Chapter XI.—Commerce and Industry.

Annual Report of the Director of Industries for 1927-28.

Report of the Chief Inspector of Mines in India for 1927.

Annual Report on the working of the Indian Factories Act in Bihar and Orissa for 1927.

Review of the Trade of India for 1927-28.

Hand Book of Mining and Mineral Resources in Bihar and Orissa.

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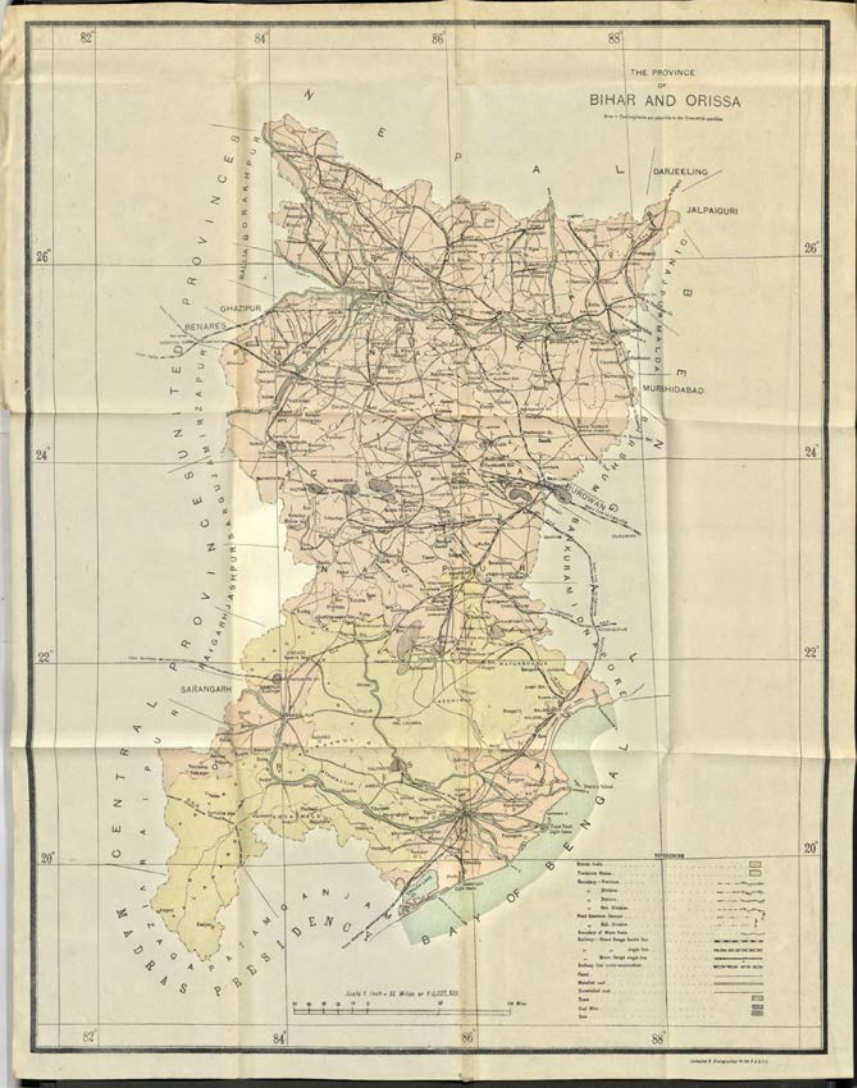
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OF
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GORAKHPUR
GHAZIPUR
BENARES
MIRZAPUR
SHAHPUR
GUNTUR
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